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THE THIRD FIVE YEAR PLAN
(1965-70)

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FOREWORD

I look back upon the economic progress in the last five years with great happiness and deep humility. We made our Second Five-Year Plan in the shadow of the past. Then our problems were grave and they appeared intransigent. Our resources were small and our needs enormous. The financial and economic system was precariously poised and endangered by policies of drift. Today we look back on the progress made in the years of the Second Plan and give heart-felt thanks for what has been achieved and say ardent prayers for the years ahead when the Third Plan will be in operation and the country will be advancing into the future with fresh hopes and aspirations.

A National Plan of development embodies the economic and social philosophy of a country. The successive Five-Year Plans indicate the sense of direction and national purpose that is inherent in economic planning. A Five-Year Plan must, therefore, be viewed not only as a collection of complex facts and figures and lists of schemes but as a projection of a nation's effort to reach goals of human happiness.

There are various ways of assessing national progress. The usual measure is the increase in national income or income per head. By this measure, Pakistan has already increased its national income by about 66 per cent and will achieve a further increase of 300 per cent in the next 20 years. The advance is in geometrical progression. But figures are meaningless unless they are related to the welfare of the common man. The real index of economic development is not cold statistics but the visible effects on the pattern of the daily life of the people. And it is here that we have to go far beyond the usual economic measurements and consider the cultural, social and religious enrichment of life, besides the material progress. And it is for this reason that economic planning has to be conceived as a part, and only as a part, of the broader social and economic frame-work which is rooted in our cultural and religious traditions.

To provide a decent life to nearly 110 million people, which number will increase by another 80 million over the next 20 years, is a vast challenge. We have accepted this challenge as a nation. We are also conscious that the path chosen by us for economic development should be guided by our own political ideals, our long-term social objectives and our proud cultural heritage. We must evolve a synthesis between economic growth and moral and spiritual values. Of course, the need of the hour is to move-speedily towards a progressive, technological, industrialised society. Basic to such a society is the spirit of enquiry and criticism and it is inevitable that many traditional institutions should change in the process if they stand in the way of rapid progress. But there are parts of our heritage so valuable that they must be preserved. There is, for instance, the family life as it is organised at present with its close ties, its traditional simplicity, its warmth and depth. It will be a poor bargain if this were replaced by an impersonal urbanised society, however, developed it may be materially. The emancipation of a great number of people from dire poverty in the next few decades will certainly give them greater control over their environment but it will not necessarily make them happier unless the moral, cultural and spiritual values of life are also preserved.

We, as a nation, are committed to planned development. For us, Five-Year Plans represent a concrete programme of action. We gave unstinted political support to the Second Five-Year Plan and its success owes itself largely to the economic discipline that the country was willing to accept. We are equally determined to make the Third Plan our platform for action in the economic field.

Our approach to economic planning has been pragmatic all along. It has been the constant endeavour of the government to mobilise the creative energies of the nation and to give all possible incentives for the stimulation of private initiative. The government has limited its own role to providing a suitable framework for the private sector and to the creation of those facilities which the private sector had neither the ability nor the willingness to develop. There have been no grand experiments in nationalisation, no fancy slogans about socialism, no undue intervention in the private sector. In fact, the government has gradually removed most of the administrative and bureaucratic controls which hampered progress of the private sector.

The result of this approach has been the rapid growth of private enterprise in Pakistan. This has certainly yielded high rates of growth, especially in recent years, but it has also led to some problems. Capitalism all over the world has already undergone a profound transformation and its character today in the Western countries is very different from the capitalism of the 18th and 19th centuries which was characterised by excessive profits, exploitation of labour and disregard of the larger welfare of society. We have to ensure that in Pakistan too, private enterprise moves towards that stage of enlightenment where making of high profits and their re-investment ceases to be the sole or even the major criterion of success and the private sector is motivated by the larger interest of society. It will be our firm policy, therefore, to prevent excessive concentration of income and wealth in the hands of a few, to distribute economic opportunities widely and so to regulate private enterprise that society as a whole benefits by it. It is our intention to humanize all such vested interests as stand in the way of a progressive, dynamic society. The feudalistic structure in the rural areas has already been humanized through land reforms. We are determined to see that such a feudalistic pattern does not emerge elsewhere, whether in the industrial field or in the social sphere. The emerging industrial class must turn its undoubted energies to efficient economic management of the country and refrain from conspicuous consumption and ostentatious living and from developing any partis an political interests so that the need for corrective action does not arise.

The ultimate aim of all our efforts in economic and social spheres can only be to move speedily towards the attainment of Islamic Socialism in Pakistan. The term Islamic Socialism is almost inter-changeable with " welfare state ". In addition to the familiar welfare goals, Islamic Socialism implies that the cultural and religious heritage of the country should be preserved and not allowed to be destroyed by the ruthless pursuit of economic development. It is, therefore, a concept much broader than the "welfare state" and embraces all the phases of an individual's life.

What is basic to the establishment of Islamic Socialism is the creation of equal opportunities for all rather than equal distribution of wealth. In fact, perfect equality of incomes has never been achieved, not even in the Communist countries, because differences in aptitudes and talents make for differences in income even when individuals start off with equal opportunities. And this is as it should be. The important thing is that every individual must be given the fullest opportunity to develop his natural talents and that he should not be inhibited by an oppressive economic and social frame-work.

There are three corner-stones of this policy of ensuring equal opportunities to which we are committed. Firstly, it is the intention of the government to provide universal free primary education to all. Secondly, it is our aim to ensure a system of merit scholarships at the secondary education level. Thirdly, we intend to provide competitive entry to jobs at all levels. These objectives are already embodied in the Constitution. Their achievement will automatically ensure that a child gets the maximum possible opportunity for advancement irrespective of his economic or social class.

Of course, our objectives go far beyond providing equal opportunities in the field of education and jobs. The government is also committed to providing all the welfare facilities which are by now a common feature in the Western world. Our resources will not permit us to provide the kind of health services and social security benefits which are prevalent in U.K. and Sweden today but we certainly intend to cover a large part of the population with social security legislation over the period of the Perspective Plan (1965—85). Thus, the coverage of health services will be increased about ten times and every family provided with a decent house to live in by constructing about 16 million new housing units in the next 20 years.

The government is also determined that a certain minimum income should be assured to every citizen. At present, about 40 per cent of the total households in East Pakistan and about 24 per cent in West Pakistan obtain a monthly income of less than Rs. 100. Such a maldistribution of income is totally unacceptable.

We are determined to ensure that no household should have a monthly income of less than Rs. 100 by 1985. This will at least provide the minimum facilities of life and protect a large segment of the population against the constant fear of privation and hunger.

One of the fundamental objectives of our policy is to bring about a better cohesion between East and West Pakistan in all fields—economic, political and social. We are firmly committed to eliminate disparities in *per capita* income in the shortest possible time and this has been made a specific objective of the Perspective Plan. But the process of national integration has to extend far beyond the economic field and must embrace all the phases of an individual's life. At the same time, we should also take advantage of the possibilities of regional co-operation on a broader scale, particularly with the neighbouring Islamic countries. The recent moves towards regional economic co-operation between Pakistan, Iran and Turkey should be looked at in the context of this long-term goal of extending our regional ties as broadly as possible.

This Plan is the result of an evolutionary process in which not only the technicians but the whole Nation has participated. We have brought about a democratisation of the planning and implementation process by the decentralisation of development functions of the Government and this has created an unprecedented enthusiasm for planned economic development. The Rural Works Programme particularly has carried development to the very heart of the countryside. We are convinced that it is only through a mobilization of the creative energies of the entire nation that planned development can really succeed.

MOHAMMAD AYUB KHAN,
N. PK., H.J., F.M.,
President of Pakistan.

PREFACE

"Hope builds sooner than knowledge destroys" may be said truly of Asia's millions: and so, despite undiminished poverty and unrealized promises of affluence, disappointment has been contained. But they live on the edge of great anxiety and might easily be pushed into despair. Disappointments are shared by all Asian people. It is not that the governments of the Asian countries have not tried; it is just that economic development has come to be regarded as the only index of a country's progress, freedom's reason, the goal, the aim and the object of every effort and the only test by which to judge governments. And, thus, the nations' and the individual's values have come to be assessed with economic measurements only. It is inevitable that with this concentric attention on economic growth, its slow pace should create conflicts.

In Pakistan, the economy has moved, *albeit* tardily, in the direction of self-sustaining viability. Besides the problems encountered commonly, we have additional ones arising out of the geographical separation of East and West Pakistan, the wide variation in the traditions and experience of the two zones, the confrontation between technical feasibility and political urgency, and at times these problems have become baffling.

By the end of the Second Five-Year Plan, Pakistan will have covered a long stretch of the arduous road of economic development, and new horizons will become clear and well-defined. A review of the progress achieved so far can help us not only in setting the targets for the new plans, but also in appraising the past strategies and in determining the changes which must be made to suit the circumstances of the future. It is inevitable that in the early years of its growth, a developing country should grope through dark and unknown alleys in search of both paths and goals. In the mid-twentieth century, when colonialism gave way before the drive towards emancipation of the Asian and African nations, none of these countries including Pakistan, was familiar with the techniques of development planning. Moreover, as we have learned since, there was little relevant experience available in the advanced countries on which we could rely.

The problems of economic growth and development have attracted widespread attention in recent times. But the experts agree as rarely in this sphere as they do in any other field involving complex issues having their roots deep in the infinite richness and variety of human mind. We are told by one school that if only savings were increased and invested economically, all would be well. Others again put their faith in the modern heroes—entrepreneurs, managers and technicians.

And yet another school of thought seeks panacea in a strategy which will influence institutions in the society as a whole and thus modify the human attitudes which are widely held to be hampering progress.

The truth is that there is much to be learned from these strategies and these are not mutually exclusive. Indeed, the study of a number of development cases in depth has brought out a general theory of evolution which chalks out both the stages which are generally traversed by the economy in its growth, and elaborates a host of considerations, which give to those charged with the arduous but stimulating responsibility for planning development, very useful insights. Growth theories, however, do not provide a ready made answer for specific countries and problems. For every nation has a unique development landscape, and the correct solution of the development problem has perforce to be unique in each individual case. The planner can choose at random only at his own peril.

The framework of Pakistan's Third Plan is determined by its long term economic, political and social objectives and, within these objectives, by the expected availability of resources and the need for internal consistency.

In our approach to the composition of the programme, we have tried to emphasize selectivity. Our resources—human and material—are too meagre to allow us to try to spread development too thin. We are, therefore, subjecting our projects to the closest scrutiny, in order to have only those which have the highest economic justification in terms of our objectives. We are concentrating on a number of 'growing points' with a view to spreading development without sacrificing economic efficiency. And we are putting special emphasis on industry, the most dynamic sector in our economy and the one most likely to spread new techniques and attitudes which are at the heart of the development process. It is in this sector that we hope for the decisive breakthrough.

Within the industrial sector itself, the major emphasis must be placed on the development of capital goods industries. This is a corollary of the emphasis on the reduction in the dependence on foreign assistance in the foreseeable future. Furthermore, it is politically easier to protect an expanding heavy industry sector from consumption pressures than a growing consumer goods sector. This consideration is particularly important because consumption pressures are likely to increase as higher incomes are generated in future plans, while there is a need for channelling a very high proportion of the additional incomes into domestic savings and reinvestment. The development of capital goods industries ensures high rate of saving by denying the current generation some of the goods that it would like to have for immediate consumption.

It is our intention to move in the direction of a 'welfare state' with efficiency and despatch. The term 'welfare state' has a well-accepted connotation which in our country would be accepted as synonymous and interchangeable with 'Islamic

Socialism'. How fast we can progress towords this goal depends on the availability of resources which can be spared from directly productive activities without impairing the minimum rate of economic growth which we must achieve to support distribution programmes.

Our social welfare programmes are, by no means, unambitious. By 1970, we expect to extend medical facilities to nearly 40 per cent of the population, including 33 million people in rural areas. By that time, most parts of the country should be covered by the malaria eradication programme which is expected to be completed in 1974. All these medical facilities will be provided free of cost by the Government. They will be supplemented by health insurance schemes relating to industrial workers and others which are in various stages of development. A beginning has also been made in the field of medical social work; it is expected that this programme will gather momentum during the Third Plan period.

The Social Insurance Legislation of 1962 provides for insurance against employment, injury, maternity and sickness. Its implementation is being worked out by the Provinces. An integrated national insurance system, covering the provisions of this legislation together with the provisions of superannuation benefits through pooling and extension of existing provident funds, should mature during the Third Plan period. It is difficult, however, to foresee in the near future an unemployment insurance scheme of general scope in view of the vast nature of the under-employment problem and our limited capacity to afford such a venture.

In the field of education, 70 per cent of the children in the age group of 5 to 10 years will be attending primary schools by 1970. The cost of primary education will be equally shared between the Government and the local communities. Considerable progress is to be made in the field of technical education to equip ourselves for the industrial society of tomorrow. During the Third Plan period, we expect to produce 5,000 engineers and 23,000 technicians, trained up in engineering institutions including polytechnics. Vocational courses will be introduced at the middle and high levels of secondary education and science education emphasized at the higher levels in order to feed engineering and medical colleges and polytechnics.

This is perhaps the maximum that the nation can afford in the field of social services in the five years of the Third Plan without diverting resources from needs which are far more pressing.

Economic development always entails profound social changes, the speed of which varies according to the attitude of the community and its political leadership towards change. It can be brought about either through a radical revolution or in a slower evolutionary manner. Pakistan has adopted the latter course in order to avoid excessive hardships and possible errors of radicalism. As a result, even when our ultimate goals are not so rigidly defined because of the evolutionary philosophy that we follow, there is no doubt that all our economic and social policies are leading the country towards Islamic Socialism.

In the following pages, an effort has been made to sketch out the strategy, structure and dimensions of the Third Five-Year Plan. One purpose is to indicate the general framework within which detailed work can begin. Another is to raise important issues of philosophy and strategy of the Third Plan which we believe should be debated earnestly and at length throughout the country. Preparation of the Third Plan is not something to be left to "the planners". Rather it should be a democratic process in which the nation as a whole reviews its past development, surveys the problems ahead, and then collectively plans its attack on the problems with which it is faced.

As I said in my statement before the National Economic Council on 24th May, 1963, the Third Plan will be crucial in Pakistan's history. The Second Plan has squarely launched us on the road to economic progress. There has been a spur in the rate of growth. A widespread interest in development has been kindled. There is now a fuller awareness of the development problems. What the Third Plan will show is how fast the country can develop, what resources of courage, sacrifice, of wisdom and of endurance we as a nation can muster in the name of war against poverty.

The answer will decide our social, economic, and political future for many years to come. If we can make the effort, and if we can maintain a rising momentum of development in the Third and Fourth Plans, then there is every hope that sufficient impetus will be generated to carry us to a prosperous and stable Pakistan. But if we falter now, the rising flood of population growth will overwhelm what development we have achieved, with incalculable consequences for the future.

SAID HASAN, H.Q.A.,
Deputy Chairman,
Planning Commission.

Part I

ECONOMIC FRAMEWORK

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The [illegible] will decide our social, economic and political future for many years to come. [illegible] commitment [illegible] of development in the Third and Fourth Plans [illegible]. But if we falter now, [illegible] development we have achieved [illegible] consequences for the future.

S. [illegible]

Deputy Chairman,

Planning Commission.

CHAPTER I

REVIEW OF PLANNED DEVELOPMENT

The First and Second Five-Year Plans marked definite stages in the country's economic progress. The concept of planning was in fact introduced with the Colombo Plan in 1950. The First Plan (1955-60) and the Second (1960-65) refined this concept and established the institutions through which planning could be effectively implemented. Both the Colombo Plan and the two subsequent Plans had as their main purpose the creation of the economic infra-structure and the initiation of institutional reforms which would facilitate uninterrupted economic expansion. In retrospect, the general lines of advance which these Plans proposed appear to be sound. The First Plan was instrumental in creating some of the basic infra-structure for economic growth even though its impact on the increase in per capita incomes was insignificant. The Second Plan accelerated the pace of development and led to a rapid increase in national and per capita incomes.

I. GROSS NATIONAL PRODUCT

2. In the fifteen years of planned development (1950-65), Gross National Product increased by about 66 per cent (*see* Table 1).

TABLE 1

GROSS NATIONAL PRODUCT AND PER CAPITA INCOME

(in 1959-60 prices)

	1949-50	1954-55	1959-60	1964-65	Annual compound rate of growth (%) 1949-50 to 59-60	Annual compound rate of growth (%) 1959-60 to 64-65
GNP at factor cost (million Rs.) ...	24,466	27,908	31,439	40,525	2.5	5.2
Population (million) ...	79	88	99	112	2.3	2.6
Per capita income (Rs.) ...	311	316	318	360	0.2	2.5

3. For purposes of economic analysis, this period of 15 years falls into two distinct sub-periods, from 1950 to 1960 and 1960 to 1965. During the 1950's the GNP is estimated to have increased at an annual rate of 2.5 per cent and this increase was being nearly offset by population growth so that the net improvement in per capita incomes was quite insignificant. The later period (1960-65) will end up with a trend growth rate of about 5.7 per cent. The change is a decisive one.

Whereas during the first ten years the absolute increase in per capita income was only Rs. 7.00, in the later five-years it would be about Rs. 42.00. The implication for the future is important. The 2.5 per cent growth rate achieved during the first ten years would have doubled the GNP in 28 years; the recent growth rates would double it in 14 years. It is with this background of accelerated growth rates that Planners are now confidently predicting an annual growth of 6.5 per cent per annum for the Third Plan and an annual growth rate of 7.2 per cent for the period 1965 to 1985 which would double the GNP in 10 years and quadruple it over the Perspective Plan (1965-85). It is by this process of successive readjustments in targets that the time for reaching self-sustained growth is progressively reduced.

4. An analysis of the growth rate in the GNP presented in Table 2 shows that industry has been the leading sector in the economy.

TABLE 2

COMPONENTS OF THE GROSS NATIONAL PRODUCT

(Million Rs.; 1959-60 prices)

Sector	1949-50	1954-55	1959-60	1964-65	Annual compound rate of growth (%) 1949-50 to 59-60	Annual compound rate of growth (%) 1959-60 to 64-65
Agriculture ...	14,669	15,654	16,753	19,895	1.3	3.5
Manufacturing ...	1,433	2,220	2,930	4,440	7.4	8.6
Large-scale ...	(346)	(1,002)	(1,565)	(2,888)	16.3	13.0
Small-scale ...	(1,087)	(1,218)	(1,365)	(1,552)	2.3	2.6
Services ...	8,364	10,034	11,756	16,190	3.5	6.7
Total ...	24,466	27,908	31,439	40,525	2.5	5.2

The average growth rate of large-scale industry over the last 15 years has been as high as 15 per cent per year. In fact, the growth rate was higher during the first ten years (about 16 per cent per annum) since a start was made from a very low base. The rate of industrial growth came down in the last five years to about 13 per cent per annum. Even such high growth rates in the large-scale industrial sector did not make a significant impression on the over-all growth rate because of the small weight of this sector in the total national product. The annual growth rate in agriculture was only 2.0 per cent over the last 15 years which fell short of the population growth rate of 2.5 per cent. The slow rate of growth in agriculture limited the availability of exportable surpluses of agricultural raw materials and tended to dampen the demand for industrial products since purchasing power in the rural areas was not increasing at a fast enough rate. The widely divergent growth rates in agriculture and industry during these 15 years made economic progress less harmonious than it should have been and exercised an adverse influence on the over-all rate of growth. After some of the early import substitution possibilities for consumers goods were exhausted, the pace of industrial development had to depend on the expansion of the domestic market, particularly in the rural areas, which was restricted by the slow growth of agriculture. Fortunately, the growth rate in agriculture has improved recently. Whereas the annual growth rate in agriculture was only 1.3 per cent during 1950-60, it is estimated to have increased to 3.5 per cent during 1960-65. So far as the contribution of service (like transport, banking, trade, government etc.) is concerned, it tended to increase at a rate slightly faster than the increase in national income.

5. The divergent growth rates in agriculture, manufacturing and services led inevitably to a structural change in the economy which appears to be fairly pronounced despite the short span of time analysed here (*see* Table 3).

TABLE 3

STRUCTURAL CHANGE IN THE GROSS NATIONAL PRODUCT

(Percentage share in the GNP)

Sector	1949-50	1964-65
Agriculture	60.0	49.1
Manufacturing	5.8	11.0
Large-scale	(1.4)	(7.1)
Small-scale	(4.4)	(3.9)
Construction	1.0	4.4
Transportation and communication	5.1	6.0
All other	28.1	29.5
	100.0	100.0

The contribution of the agricultural sector to the GNP is estimated to decline from about 60 per cent in 1949-50 to about 49 per cent in 1964-65, whereas that of manufacturing will increase from 6 per cent to 11 per cent. Construction is estimated to increase from 1 per cent of GNP in 1949-50 to 4 per cent in 1964-65, and transportation will increase from about 5 per cent to 6 per cent. All other sectors will increase from 28 per cent to about 30 per cent. The most decisive increase has been in the contribution of the large-scale industrial sector. Its share has increased from 1.4 per cent to 7.1 per cent in 15 years. Within the industrial sector, the share of large-scale industry as compared with small-scale industry is estimated to increase from about 24 per cent in 1949-50 to about 65 per cent in 1964-65. This is a trend which is likely to continue. The economy is becoming progressively industrialised and its preponderant dependence on agriculture is diminishing.

6. The structural change in the economy has profound implications for future growth rates. As the relative weight of large-scale industry increases, its high rate of growth is likely to have a decisive influence on the aggregate rate of growth. Besides, a certain degree of firmness is being imparted to the growth rates as the share of the non-agricultural sectors is increasing in the economy and as the growth rate of these sectors is relatively more stable than that of the agricultural sector. It is also clear from this analysis that if growth rates in the agricultural sector are stepped up in future plans, the economy can look forward to an era of unprecedented economic progress.

II. INVESTMENT

7. There has been a remarkable acceleration in gross investment in the last 15 years. Gross investment is expected to be over 5 times as high in 1964-65 as in 1949-50 in terms of constant prices and without including expenditure on Indus Basin replacement works. As a result, the investment in 1964-65 will amount to 15.8 per cent of the GNP as against 4.6 per cent in 1949-50.

TABLE 4

GROSS INVESTMENT: SIZE AND DISTRIBUTION

(Million Rs. ; 1959-60 prices)

Type of Investment	1949-50	1954-55	1959-60	1964-65
Fixed monetized investment ...	740	1,710	2,600	5,300
Public	(310)	(610)	(1,710)	(2,670)
Private	(430)	(1,100)	(890)	(2,630)
Non-monetized investment ...	350	370	400	440
Rural works programme ...	—	—	—	400
Changes in stocks	30	120	430	250
Total investment	1,120	2,200	3,430	6,390
Investment as a percentage of GNP ...	4.6	7.9	10.9	15.8

Note:—All tables on investment in this chapter exclude investment in Indus Basin Works.

8. The rate of increase in investment has been uneven during the period under review. The pace rose rapidly prior to 1955, slowed down during 1955-60 and then rose sharply again. The increase during the five years of the Second Plan was higher than that during the preceding decade.

9. The share of public and private sectors in total investment has also undergone a great change. The share of public sector in total investment increased from about 28 per cent in 1949-50 to about 48 per cent in 1964-65 (*see* Table 5). This marked shift of emphasis towards the public sector was found necessary to step up the pace of development and to balance its structure. It did not imply any neglect of the private sector: in fact, private investment increased at an annual rate of about 10 per cent over this period. It only indicated the greater responsibility which the public sector had to shoulder, within the framework of planned development, by way of creation of basic infra-structure which the private sector required for its accelerated development. The major shifts in the shares of public and private sectors in investment is an interesting characteristic of this early phase of development.

TABLE 5

RELATIVE SHARE OF PUBLIC AND PRIVATE FIXED INVESTMENT
(Million Rs. ; 1959-60 prices)

Type of Investment	1949-50	1954-55	1959-60	1964-65	Annual compound rate of growth
Public investment	310	610	1,710	3,070	16.5
Private investment	810	1,590	1,720	3,320	9.9
Total investment	1,120	2,200	3,430	6,390	12.3
Public investment as a percent of total investment	28	28	50	48	

10. Most of the investment during this period has gone into the creation of economic and social over-heads. In fact, as much as 60 per cent of the total investment was devoted to the expansion of facilities in the fields of water and power, transport and communications, housing, education, health and other social services (*see* Table 6). One of the important shifts in emphasis that is noticeable from a study of the sectoral distribution of investment is the gradual increase in the share devoted to agriculture (from 6 per cent in the 1950-55 period to 16 per cent in the Second Plan, including works programme), and an effort to curtail the high expenditure on housing (from 22 per cent in the 1950-55 period to 15 per cent in the Second Plan). There has also been an increase in emphasis on the development of water and power resources and the extension of transport and communication facilities because the inadequacy of these two was the main impediment to smooth economic growth. As a result of these investments, considerable

infra-structure has already been built, though it needs further strengthening in East Pakistan.

TABLE 6

DISTRIBUTION OF INVESTMENT BY ECONOMIC SECTORS

(Percentages)

Sector	Pre-Plan (1950-55)	First Plan (1955-60)	Second Plan (1960-65)
Agriculture	6	7	13
Water and power	13	17	19
Industries, fuels and minerals	36	31	28
Transport and communications	14	17	17
Physical planning and housing	22	20	15
Education	5	6	4
Health	3	2	1
Social welfare and manpower	1	Neg.	Neg.
Works programme	—	—	3
Total	100	100	100

11. As mentioned above, a large proportion of the development outlay has been on the expansion of the country's economic and social infra-structure, the full impact of which on the growth of income and consumption will be visible after sometime. The improvement in the framework of development is, however, already apparent. Water and land development programmes up to the middle of 1962 had brought 2.1 million acres of new land under cultivation while improving the supply of water to 7.6 million acres of old land. The installed electricity generating capacity increased from 143 megawatts in 1947-48 to 1,435 megawatts in 1964-65. The mileage of superior type roads increased from 5,706 in 1948 to 13,400 in 1964-65, while the mileage of other types of roads increased from 11,547 to 55,130 during the same period. The number of post offices increased from 6,474 in 1947-48 to 11,800 in 1964-65, while the number of telephones during the same period rose from 15,283 to 135,000.

III. DOMESTIC SAVINGS

12. The last 15 years have also witnessed a considerable increase in domestic savings though it was by no means as fast as the increase in investment. Whereas investment increased at an annual rate of about 12.3 per cent, increase in domestic savings was at the rate of about 8.5 per cent (*see* Table 7).

TABLE 7

GROSS DOMESTIC SAVINGS

(Rs. Million, 1959-60 prices)

	1949-50	1954-55	1959-60	1964-65
GNP (factor cost)	24,466	27,908	31,439	40,525
Investment	1,120	2,200	3,430	6,390
Domestic savings	1,120	1,900	1,850	3,830
Saving as a % of GNP	4.6	6.8	5.9	9.5(a)
Marginal rate of savings (percent) ...		22.7	—1.4	21.8(a)

(a) These figures compare with estimates of 10.3% and 22% in terms of current prices out of GNP at market prices as shown in Chapter V.

The domestic savings will increase from less than 5 per cent of the GNP in 1949-50 to about 9.5 per cent in 1964-65. The marginal rate of savings for the entire period will be about 17 per cent, implying that about one-sixth of the additional income was saved and reinvested. The saving effort would have looked even more respectable but for the decline in the marginal rate of savings during 1955-60 owing to a frustrating array of administrative controls on private investment. The acceleration in savings, both during the 1950-55 period and the Second Plan, was fairly sharp because of the textile boom in the earlier period and the withdrawal of most of the direct administrative controls and introduction of liberal import policy in the latter.

13. The strategy of domestic savings also changed significantly over this period in response to the changing structure of the economy. There was a considerable transfer of income from the agricultural to the industrial sector during the 1950's as terms of trade were deliberately turned against agriculture through such policies as licensing of scarce foreign exchange earned primarily by agriculture to the industrial sector, compulsory Government procurement of foodgrains at low prices to subsidize the cost of living of the urban, industrial workers, generous tax concessions to industry and lack of similar incentives for commercial, agricultural investment. These policy measures resulted in accelerated growth rates in industry and reinvestment of industrial profits to the extent of 75 to 80 per cent. Thus, the rural areas were transferring savings to the fast modernising, urban capitalist sector. There was a distinct change in this pattern in 1960 when support prices were established for foodgrains to protect agricultural incomes, foodgrains rationing was abandoned by the Government and a policy of gradual withdrawal of some of the generous tax concessions given to industry was initiated. The change was necessitated by the need to stimulate incentives for a stagnant

agricultural sector and to restrain unhindered growth of industrial accumulations. There is evidence that the pattern of growth during the 1950-60 and 1960-65 period has responded adequately to the policies that were adopted for mobilisation of domestic savings.

IV. FOREIGN ASSISTANCE

14. As already pointed out above, the increase in domestic savings has not kept pace with the increase in investment; the need for foreign assistance has consequently been increasing over the last 15 years. From Table 8 below, it is clear that foreign assistance, which made a small contribution till 1955, increased to 5 per cent of the GNP in 1959-60 and to 6.3 per cent in 1964-65. Its share in the financing of total investment increased from about 14 per cent in 1954-55 to about 40 per cent in 1964-65. Foreign assistance, as such, played quite a decisive role in accelerating the rate of investment in the economy and in raising growth rates. Most of the foreign assistance in the first ten years became available in the form of either grants or loans repayable in rupees. After 1960, however, almost all the foreign assistance, except under PL-480, has assumed the character of loans repayable in foreign exchange. As a result, the debt servicing liability of the country has increased rapidly from Rs. 80 million in 1959-60 to about Rs. 300 million in 1964-65.

TABLE 8

ROLE OF FOREIGN ASSISTANCE

(Million Rupees; 1959-60 prices)

	1949-50	1954-55	1959-60	1964-65
Gross investment	1,120	2,200	3,430	6,390
Gross domestic savings	1,120	1,900	1,850	3,830
Foreign assistance	—	300	1,580	2,560
Foreign assistance as a percent of:				
(a) Gross national product ...	—	1.1	5.0	6.3
(b) Total investment ...	—	13.6	46.1	40.0

V. STRUCTURAL CHANGE

15. Though a period of 15 years is not sufficiently long to form the basis of a reliable analysis of structural changes in an economy, one can already see the trend of this change in the GNP, rate of investment and savings, exports and imports, and finally in employment. The contribution of the industrial sector

to the GNP has increased sharply as the economy has become progressively diversified. The same diversification is apparent in the pattern of exports and imports. Whereas the share of manufactured goods in total foreign exchange receipts was only 1 per cent in 1951-52, it will increase to 29 per cent by 1964-65. The earnings from invisibles, in the form of travel remittance, etc., will increase from 10 per cent of the total earnings in 1951-52 to 18 per cent in 1964-65 (*see* Table 9).

TABLE 9

COMPOSITION OF FOREIGN EXCHANGE EARNINGS

(Percentages)

	1951-52	1954-55	1959-60	1964-65
Primary raw materials	89	88	63	53
Manufactured goods	1	3	25	29
Invisibles	10	9	12	18
Total	100	100	100	100

The preponderant dependence of the economy on the export of agricultural products has been reduced, from nearly 90 per cent in 1951-52 to about 53 per cent in 1964-65. This is an important change as it will increasingly protect the economy from extreme fluctuations in exports from one year to another.

16. In respect of imports, the change has been towards much larger imports of capital goods and raw materials for capital goods (*see* Table 10). In fact, the proportion of consumer goods imports declined sharply from 46 per cent in 1951 to 22 per cent in 1964-65. Excluding consumer goods imported under PL-480 programme, consumer items constitute only about 12 per cent of total imports. This trend reflects the import substitution of consumer goods through the growth of domestic industrial capacity. A similar substitution for raw materials for consumer goods is also visible since intermediate products like yarn were increasingly produced by domestic industry. The import of capital goods and raw material for capital goods has increased dramatically, from 27 per cent in 1951 to 64 per cent in 1964-65, reflecting the development orientation given to the import structures over the last 15 years.

TABLE 10

COMPOSITION OF IMPORTS

(Percentages)

	1951	1956	1960-61	1964-65
Consumer goods (including P.L.-480)	46	35	32	22
Raw materials for consumer goods (including P.L.-480)	27	12	12	14
Capital goods	20	36	38	47
Raw materials for capital goods	7	17	18	17
Total	100	100	100	100

17. The country has also become progressively urbanised over this period. Only about 10 per cent of the population lived in urban areas in 1950. The percentage will increase to about 15 by 1965. In absolute numbers, the population of the urban areas has more than doubled during this period (*see* Table 11). The progressive industrialisation of the economy is also reflected in the employment pattern. The increase in jobs in the non-agricultural sector is proceeding at a rate much faster than in the agricultural sector.

TABLE 11

INCREASE IN POPULATION AND URBANIZATION

(Million)

	1949-50	1954-55	1959-60	1964-65
Total Population	78.8	87.8	98.9	112.4
Rural	71.0	78.0	86.3	95.9
Urban	7.8	9.8	12.6	16.5
Percentage urban population	9.9	11.2	12.7	14.7

18. The increase in industrialisation and trade is also reflected in the growth of financial institutions. The bank offices have multiplied about 6 times. Bank credit increased from about Rs. 500 million in 1950 to about Rs. 6,000 million at the end of 1964. Though it is difficult to give any quantitative estimates, the economy is becoming increasingly monetized judged by all the fragmentary evidence that is available. The strengthening of financial super-structure is particularly impressive over the period of the Second Plan. The main question that is arising currently is the distribution of bank credit by economic sectors, geographical regions and personal income groups. It is quite clear from the recent experience that the distribution of Bank credit will have to be related more closely to the planned objectives of the country.

VI. REGIONAL DEVELOPMENT

19. An effort has been made in the last 15 years to accelerate the pace of development in East Pakistan. As can be seen from Tables 12 and 13, the acceleration has been particularly fast during the Second Plan period.

TABLE 12

RATE OF GROWTH IN EAST AND WEST PAKISTAN(a)
(Million Rupees; 1959-60 prices)

				Annual compound rate of growth (%)	
	1949-50	1959-60	1964-65	1949-50 to 1959-60	1959-60 to 1964-65
GNP					
East Pakistan ...	12,360	14,945	19,455	1.9	5.4
West Pakistan ...	12,106	16,494	21,070	3.1	5.0
All Pakistan ...	24,466	31,439	40,525	2.5	5.2
Per capita income (Rs.)					
East Pakistan ...	287	278	318	—0.3	2.7
West Pakistan ...	338	366	411	0.8	2.4
All Pakistan ...	311	318	360	0.2	2.5

(a) Data for 1949-50 to 1959-60 derived by Planning Commission on basis of background material on National accounts obtained from C.S.O. Banking and Insurance, Central Government and PIA allocated to Provincial accounts in proportion to directly allocable items.

20. The above table is derived from the latest estimates of the Central Statistical Office. It clearly brings out the dramatic change that is taking place in East Pakistan. Whereas in the ten years from 1949-50 to 1959-60 the regional income of East Pakistan increased at an annual rate of 1.9 per cent and was outpaced by the increase in its population, the growth rate jumped up to 5.4 per cent during the Second Plan. From a position of a declining per capita income till 1959-60, East Pakistan is now experiencing a net improvement of 2.7 per cent in its per capita income and a rate of growth higher than that of West Pakistan. Similarly, the rate of increase in public sector expenditure which was slightly higher in East Pakistan during the first ten years, is estimated to be more than twice as fast in East Pakistan as in West Pakistan during the last four years (*see* Table 13). The share of East Pakistan in total Government expenditure has already risen from 26 per cent in 1949-50 to nearly 50 per cent in 1963-64. The strategy implicit in these numbers is clear. In both regions the growth rate is being stepped up, but at a much sharper rate in East Pakistan, to permit a reduction in the disparity in incomes between the two Provinces.

TABLE 13

PUBLIC SECTOR DEVELOPMENT EXPENDITURE

(Million Rs.; current prices)

	1949-50	1959-60	1963-64	Annual compound growth rate (%) 1949-50 to 1959-60	Annual compound growth rate (%) 1959-60 to 1963-64
East Pakistan ...	84	675	1,745	23.5	20.9
West Pakistan ...	238	1,195	1,755	17.5	8.0
Total ...	322	1,870	3,500	19.2	13.4

Note:—The table gives different figures from Table 4 because it includes recurring development expenditure and is expressed in current prices.

VII. PRODUCTION TRENDS

21. The Gross National Product increased by 66 per cent over the last fifteen years. This increase was the average of widely different production trends' by sectors and by commodities (*see* Table 14).

TABLE 14

PRODUCTION OF SELECTED COMMODITIES

(Indices: 1960=100)

Commodity(a)	1950	1955	1960	1963
Wheat	100	82	100	106
Rice	86	89	100	123
Jute	60	84	100	106
Cotton	76	97	100	143
Cotton yarn	11	70	100	120
Cotton cloth	17	73	100	118
Jute goods	—	39	100	119
Cigarettes	15	49	100	164
Sugar	22	65	100	191
Vegetable oils	12	42	100	228
Cement	37	61	100	132
Coal	53	65	100	149
Crude petroleum	49	78	100	133
Motor spirit	39	68	100	273
Kerosene	36	49	100	944
Electric energy	17	45	100	200
	1949-50	1954-55	1959-60	1963-64
Index of:				
Agricultural production	86	90	100	116
Manufacturing production ...	22	64	100	165
Mining production	39	64	100	161

(a) For wheat, rice, jute and cotton the data relate to the crop year 1949-50, 1954-55, 1959-60 and 1963-64.

22. The table demonstrates clearly that textile industries expanded at the fastest rate in the first five years, followed by the production of vegetable oils and cigarettes which showed their fastest growth during the First Plan. In the Second Plan period, the established industries showed much slower growth, the lead being taken over by petroleum products and sugar industries. Electricity more than doubled over each five year period. These production trends indicate the gradual shift taking place towards more sophisticated industries and reflect the conscious industrial policy followed during this period.

VIII. CONSUMPTION TRENDS

23. The impact of economic progress during the last 15 years on the common man's material well-being may not yet have been very marked, but a general improvement is clearly visible. Per capita income increased between 1949-50 and 1964-65 by 16 per cent, mainly during the last five years, but consumption of many products increased considerably faster. Between 1954-55 and 1960-61, the per capita consumption of foodgrains increased by 14 per cent[1], of refined sugar by 14 per cent, of tea by 64 per cent and of cigarettes by 146 per cent. The per capita expenditures on cotton textiles showed a growth of 20 per cent and on artificial silk by 15 per cent. Per capita consumption of paper tripled over the same period.

24. But there are significant deficiencies too. The average level of calories intake is below the nutritional standard, the current average consumption of calories being 1855 per capita per day. Furthermore the composition of the diet is unbalanced lacking specially in protective and proteinous foods. It is estimated that per capita daily consumption of animal protein is only about 8 grammes, against around 35 grammes in the Mediterranean countries and twice as much again in the industrialised countries. The consumption of cloth at 14 yards per capita is low, housing is distressingly deficient and the provision of lighting, sewerage and drinking water is quite inadequate. The situation is also unsatisfactory in the social and medical fields. Only 15 per cent of the population is literate, only 45 per cent of the children at primary school-age are in schools and there is only one doctor per 7,000 inhabitants. The death rate, especially maternal and infant mortality, is very high.

IX. EMPLOYMENT

25. It is difficult to make precise estimates of the increase in employment over the last 15 years, but it is quite apparent that important changes took place during the period. Rough estimates indicate that unemployment and underemployment together amounted to approximately 5.6 million idle man-years in 1950, increasing to 7.5 million at the beginning of the Second Plan. Thus, about one-third of the new entrants into the labour force during that decade could not be gainfully employed. During the Second Plan, this trend seems to have been reversed, and sufficient employment opportunities were created to absorb the additions to the labour force. The Rural Works Programme, which was inaugurated in 1961-62, has made a substantial contribution towards this, also demonstrating that significant improvement in the employment situation can be made by modest capital expenditures and in areas where this is needed most urgently.

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[1] A three year average is used in determining the consumption of foodgrains in both years.

X. PRICE TRENDS

26. The trend of prices was fairly uneven during the period under review. The deflator used by the Central Statistical Office in its national income estimates shows a price decline of about 15 per cent between 1950 to 1955, and then a sharp price increase of about 40 per cent during 1955 to 1960 (*see* Table 15). This trend is also confirmed by the general cost of living indices constructed for industrial workers by the Central Statistical Office. It appears that in the first five years of the period under review, the prices declined as the Korean boom of 1950-51 petered out. Prices started rising again during the First Plan period especially as a result of liberal recourse to deficit financing. The price increase under the Second Plan, however, has been fairly modest, averaging about 2 to 3 per cent for retail and 1.6 per cent for wholesale prices. These price trends are also confirmed by the analysis of the increase in money supply. The annual rate of increase in money supply which was around 7 per cent during 1950-54, accelerated to 10 per cent during 1954-58, was brought under control and reduced to 3 per cent during 1958-62 when the monetary overhang was worked off. Though the price indices are still unsatisfactory, they do show that the inflationary tendencies, which were manifesting themselves in the late 1950's, have been brought under control and economic growth is now proceeding side by side with relative price stability.

TABLE 15

COST OF LIVING AND PRICE INDICES

(1959-60=100)

Index	1954-55	1959-60	1963-64	Annual Compound rate of Increase (%) 1954-55 to 1959-60	Annual Compound rate of Increase (%) 1959-60 to 1963-64
1. Cost of Living Index (C.S.O.)					
(a) Karachi ...	86	100	105	3.1	1.6
(b) Lahore ...	87	100	115	4.7	4.7
(c) Narayanganj ...	72	100	109	6.8	2.9
2. National Income Deflator (C.S.O.) ...	75	100	106	5.9	1.9
3. Wholesale Price Index (C.S.O.) ...	58(a)	100	105	11.5	1.6

(a) Institute of Development Economics, Karachi.

XI. CONCLUSION

27. In retrospect, the general lines of advance proposed in the First and Second Plan still appear to be sound. However, it is now apparent that the First Plan was over-optimistic in certain respects and its implementation seriously suffered because of the absence of adequate Government support for the planning process. In spite of the fact that the results of the First Plan fell short of targets, the Plan succeeded in creating considerable growth potential in the economy by building up economic and social overheads. Notable gains were registered in electric power, railways, ports, communications, certain types of industry and some of the water control projects. Perhaps the most significant improvements during the First Plan period were organisational and institutional. Many new agencies were set up, training facilities were expanded and important investigations and surveys initiated. Significant improvement also took place in the climate for economic growth, making accelerated development possible during the Second Plan period. The conspicuous failures of the First Plan were in the fields of agriculture and education.

28. The economy has witnessed a fairly rapid rate of growth during the Second Plan period. The investment rates have gone up dramatically, both because of the larger inflow of foreign assistance and the increased domestic savings. The economy is already undergoing a significant structural change which is evident in the rising contribution of industry to GNP, employment and exports. The pace of development in East Pakistan has been accelerated. There is no doubt that by the end of the Second Plan, the economy will be poised for a more ambitious development effort.

CHAPTER II

LONG-TERM PERSPECTIVE

1. The preparation of the Perspective Plan reflects in many ways the growing confidence of the country in its future. The Plan is more than just a projection into the distant future: it is, in fact, a realistic statement of the goals to be achieved. It gives a sense of direction to the current economic policies. It establishes targets of massive improvement to be brought about in living standards by mobilizing the resources and energies of the nation.

2. The Third Plan is the first to be formulated explicitly within the framework of a Perspective Plan. It was inevitable that the earlier years of Pakistan's development plans should be restricted to comparatively short periods of five years. But with the experience and knowledge acquired over the past 18 years, it is now possible to make projections into the future for as long a period as almost a generation. This long-term plan, *viz.*, the Perspective Plan, is being prepared for 20 years. The period is necessarily arbitrary and there is no profound reason for its determination but it seems to be, on the one hand, long enough to permit a meaningful structural change in the economy and, on the other, not so long as to be without direct interest to the present working generation. More specifically, Five-Year Plans are inadequate as a framework for targets and policies for other reasons. Many short term decisions have a bearing on long-term growth. If these decisions are taken without considering their implications for the years beyond the current Five-Year Plan, there is a danger of unexpected future imbalances. Economic growth is a continuous process so that planning for it calls for the integration and adjustment of short term, intermediate and long term programmes.

I. OBJECTIVES

3. The explicit aims of the Perspective Plan are:

(*a*) a quadrupling of the Gross National Product from about Rs. 43,365 million in 1964-65 to about Rs. 174,300 million in 1984-85; more than doubling per capita income from Rs. 386 in 1965 to Rs. 932 in 1985;

(*b*) provision of full employment to the entire labour force by about the middle of the Perspective Plan period;

(*c*) parity in per capita incomes between East and West Pakistan;

(*d*) universal literacy; and

(*e*) elimination of dependence on foreign assistance.

From time to time, there will be revaluation of the priorities attaching to various objectives of the Perspective Plan: preferences may alter as social changes are brought about over time. Even when the long-term objectives remain unchanged, it may become necessary to change some of the basic assumptions of the long-term model as more experience is accumulated in the process of growth. Moreover, since all future projections are uncertain and conditions can change rather rapidly, it is clear that a Perspective Plan can never be a document which retains its value for longer than five years at most. It will be necessary, therefore, to present a revised Perspective Plan with each Five-Year Plan.

4. It should also be understood that the various objectives mentioned above can, to a degree, be inconsistent with each other. The objective of quadrupling the national product in twenty years, for example, implies a rapid increase in the application of modern technology, which tends to be very capital-intensive. This may conflict with the goal of full employment. Again, in order to equalise per capita incomes in the two Provinces, it may be necessary to slow down the rate of growth in one region in order to accelerate the growth of another. This may make it more difficult to achieve the target of quadrupling the national product. The simultaneous pursuit of these diverse goals is made more difficult by the constraints that are imposed by the scarcity of resources. The reconciliation of these objectives constitutes a considerable challenge to the planners.

5. The primary objective of the Perspective Plan is to increase per capita incomes rapidly and to distribute them equitably. The income per average family is about Rs. 170 per month at present. It is proposed to increase this income to about Rs. 425 per month by 1985. This massive improvement will still leave living standards far below the level of developed countries. It will, however, eliminate poverty and ensure that at least the basic minimum necessities of life are available to everyone. In order to realise this objective, long-term planning must proceed not only in financial terms but on a physical plane so that adequate supplies of food, clothing, decent housing and some of the amenities are made available over the next 20 years. In addition to physical targets in the fields of food, clothing and housing, targets must also be set for education, medical facilities, transport and recreation, demand for which will be rising more rapidly than total consumers' demand. Such targets are being worked out in detail and will be incorporated in the Perspective Plan.

II. GROWTH RATE

6. The main instrument for achieving the objectives outlined above is, of course, a fast rate of increase in the Gross National Product. The basic framework of Pakistan's long-term growth model is summarized in Table 1. Most of the thinking of this model is still tentative and many of the magnitudes will be firmed up only after further studies have been carried out.

7. The Perspective Plan envisages an average growth rate of 7.2 per cent in the GNP over the next two decades. The growth rate is expected to increase from the current level of about 5.7 per cent to 6.5 per cent in the Third Plan and 7.5 per cent by the Sixth Plan. These growth rates may appear to be high, if viewed in the light of experience in other countries. It is, however, considered possible to achieve these rates of growth against the background of the Second Plan performance.

TABLE 1

BASIC FRAMEWORK OF PAKISTAN'S LONG-TERM GROWTH (1965-85)

(Rs. million; 1964-65 prices)

	1965	1970	1975	1980	1985	1965-85 (annual compound rate of growth) %
A. Key Magnitudes						
1. Gross national product (market prices) ...	45,540	62,765	89,815	129,690	187,300	7.2
2. Gross investment ...	8,400	12,700	19,180	28,650	42,800	8.5
3. Gross domestic savings	4,710	8,515	15,180	26,150	40,800	11.4
4. External resources ...	3,690	4,185	4,000	2,500	2,000	—3.0
5. Exports	3,050	4,800	7,300	11,000	14,000	7.9
6. Imports	6,990[4]	8,985	11,300	13,500	16,000	4.2
B. As a % of the GNP						
1. Gross investment ...	18.4	20.2	21.4	22.1	22.9	
2. Gross domestic savings	10.3	13.6	16.9	20.2	21.8	
3. External resources	8.1	6.6	4.5	1.9	1.1	
4. Exports	6.7	7.6	8.1	8.5	7.5	
5. Imports	15.3	14.2	12.6	10.4	8.6	
C. Key Assumptions						
1. GNP growth rate (%)[1]	5.2	6.5	7.3	7.5	7.5	7.2[2]
2. Population growth rate (%)[1]	2.6	2.7	2.8	2.6	2.1	2.6[2]
3. Marginal rate of savings (%)[1] ...	22	22	25	28	25	25[2]
4. Capital-output ratio (gross)[1,3] ...	2.8	2.9	2.9	2.9	3.0	2.9[2]
5. Marginal propensity to import (%)[1]... ...		12	9	6	4	6[2]

Notes:— (1) In the preceding 5 years.
(2) In the preceding 20 years.
(3) Assuming no time-lag between investment and output.
(4) These imports were financed to the extent of Rs. 250 million by drawing upon foreign exchange reserves.

In order to achieve these growth rates, gross investment must be increased from about 18.5 per cent of the GNP in 1965 to 23.0 per cent in 1985. The proposed increase in investment over the Perspective Plan period is quite modest in comparison to the increase already achieved under the Second Plan—8 per cent per annum over the next 20 years compared to 18 per cent achieved in the Second Plan. The reason for not postulating a sharper increase in investment lies in the related objective of termination of foreign assistance. The main task in the Perspective Plan will be to institutionalise the growth process and to finance it increasingly from domestic resources. Domestic savings are projected to increase from about 10 per cent of the GNP in 1965 to nearly 22 per cent in 1985, requiring nearly one-third of the additional income to be saved on a per capita basis. The target of eliminating foreign assistance also implies a substantial increase in exports, at an annual rate of about 8 per cent, and considerable import substitution in capital goods and intermediate products whose domestic production is projected to increase at rates of 10.0 and 13.7 per cent per annum respectively. If these targets are achieved, external assistance will decline from about 8 per cent of the GNP in 1965 to about one per cent in 1985 and Pakistan will cease to be a net capital importing country.

8. The manufacturing sector is expected to play a leading role in accelerating the overall growth rate of the economy, supported by a rate of growth in agriculture which is almost unprecedented in the experience of other countries. The projected growth rate in agriculture will result in a trebling of agricultural output, against a sixfold increase of manufacturing production (*see* Table 2).

TABLE 2

GROWTH PATTERN IN THE PERSPECTIVE PLAN

(Million Rs.; 1964-65 prices)

	1965	1970	1985	Annual compound rate of growth (1965-85) %
1. Agriculture	21,055	26,870	62,500	5.6
2. Manufacturing	5,195	8,365	36,500	10.2
(a) Consumer goods	(3,235)	(4,515)	(13,000)	(7.2)
(b) Intermediate products ...	(1,620)	(3,300)	(21,200)	(13.7)
(c) Investment goods	(340)	(550)	(2,300)	(10.0)
3. Other sectors	17,115	24,165	75,300	7.7
	43,365	59,400	174,300(*)	7.2

Within the industrial sector, the manufacture of intermediate products (such as base metals, chemicals, non-metallic mineral products and petroleum derivatives) is expected to grow at the fastest rate, 13.7 per cent per annum. The services sector is also likely to show a healthy rate of increase because it includes the fast-growing activities of transport and construction and because of the greater demand for services (such as banking, insurance, trade) that an increasingly sophisticated economy generates.

9. Implicit in this growth pattern are significant structural changes in output, employment and external trade. These are brought out in Table 3.

TABLE 3

STRUCTURAL CHANGES IN THE PERSPECTIVE PLAN

(Percentages : 1964-65 prices)

	1950	1965	1970	1985
1. Output	100	100	100	100
(a) agriculture	60	49	45	36
(b) manufacturing	6	12	14	21
(c) other sectors	34	39	41	43
2. Employment	100	100	100	100
(a) agriculture	75	65	62	49
(b) manufacturing ...	25	11	12	14
(c) other sectors ...		24	26	37

The economy is expected to become fairly diversified by 1985 relying on agriculture only to the extent of 36 per cent for national output and 49 per cent for employment. The manufacturing sector is expected to increase its contribution to the GNP from 12 per cent in 1965 to 21 per cent in 1985. A major increase in the contribution of services is also forecast. Further import substitution in consumer goods and relatively more emphasis on the domestic production of capital goods will be reflected in a decline in the proportion of consumer goods imports, falling ratio of capital goods imports to total investment and a rising import bill of raw materials for the domestic manufacture of consumer and capital goods.

IV. DOMESTIC SAVINGS

10. The feasibility of these long-term projections hinges largely on the proposed strategy for domestic savings and for the balance of payments. The proposed marginal rate of savings of 25 per cent for the Perspective Plan period compares with an actual achievement of 22 per cent in the Second Plan. It must be mentioned, however, that the proposed saving rates do not imply a greater degree of austerity than experienced in the past. In fact, a faster rate of growth will finance both a faster increase in consumption and in savings. This is clear from Table 4.

TABLE 4

INCREASE IN PER CAPITA INCOMES, CONSUMPTION AND SAVINGS

(Rs., 1964-65 market prices)

	1960-65	1965-70	1970-75	1975-80	1980-85
Per capita income ...	51	88	120	163	227
Per capita consumption ...	31	63	83	111	164
Per capita savings ...	20	25	37	52	63

The increase in per capita consumption in the Sixth Plan period will be over four times as high in absolute terms as in the Second Plan. The point is best appreciated by calculating marginal saving rates on a per capita basis (*see* Table 5). On average, the economy will be required to save about one-third of the additional income on a per capita basis over the Perspective Plan period which is just about the level that it has saved already during the Second Plan. Over the course of the Perspective Plan, the level of per capita consumption is expected to more than double.

TABLE 5

MARGINAL RATES OF SAVINGS

(Percentages)

Plan period		From total income	From per capita income
Second Plan[1]	(1960-65)	22	31
Third Plan	(1965-70)	22	28
Fourth Plan	(1970-75)	25	31
Fifth Plan	(1975-80)	28	32
Sixth Plan	(1980-85)	25	28

[1] In current prices.

In each future Plan period, the increase in per capita consumption will be considerably larger than the additional savings and not less than the increase in consumption during the previous Plans. More significant is the acceleration implied by these figures. In the Third Plan, per capita consumption will increase by about 10 per cent but, in the Sixth Plan, the cumulative effect of two decades of development will result in a rise of per capita consumption by over 25 per cent in five years.

V. BALANCE OF PAYMENTS

11. The strategy embodied in the balance of payments projections rests heavily on two main considerations. Firstly, a vigorous policy to increase export earnings must be pursued. The proposed targets imply that exports will have to grow at an annual rate of about 8 per cent—a little faster than the growth rate of the GNP so that the ratio of exports to the GNP will be of the order of 7.5 per cent in 1985 as against about 6.7 per cent in 1965. These targets are undoubtedly ambitious and their realisation will make very considerable demands on the nation's efficiency and ingenuity. However, since exports will continue to be a small proportion of the GNP, it should be possible to find markets for the country's growing exportable surpluses, particularly in manufactures.

12. The second element in this strategy is a policy of massive import substitution, especially of intermediate products and investment goods. Domestic manufacture of machinery and equipment will rise sharply from Rs. 1,080 million in 1965 to Rs. 7,250 million in 1985 and that of intermediate products from Rs. 4,700 million to Rs. 61,000 million. Imports of these commodities will rise more slowly. An idea of the extent and rate of import substitution can be provided in the following terms; over the Third Plan period, Pakistan expects to produce domestically Rs. 1,500 million worth of items that it would have imported otherwise; over the Fourth Plan this figure will rise to Rs. 6,000 million.

13. The balance of payments projections are summarized in Table 6. Upto the end of the Second Plan the gap between imports and exports was increasing, necessitating an increase in the inflow of external resources. From the Third Plan period the gap will start narrowing and the need for foreign assistance will start diminishing. The strategy for achieving this shift will be to increase exports at a rate faster than imports. Over the Perspective Plan period, exports are expected to increase at nearly twice the rate of increase in imports with the obvious implication that Pakistan's own earnings will start financing an increasing proportion of total imports. By 1985, it is expected that total imports will be financed to the extent of 88 per cent from Pakistan's own export earnings as against 44 per cent at present.

TABLE 6
BALANCE OF PAYMENTS IN THE PERSPECTIVE PLAN
(Million Rs.; 1964-65 prices)

	1965	1970	1975	1980	1985	Annual compound growth rate (1965-85)
1. Exports ...	3,050	4,800	7,300	11,000	14,000	7.9
2. Imports(¹) ...	6,990	8,985	11,300	13,500	16,000	4.2
(a) consumer goods...	1,830	2,025	2,220	(2,500)	(3,000)	2.5
(b) capital goods ...	2,015	2,840	4,300	(5,500)	(6,500)	6.0
(c) intermediate products	3,145	4,120	4,780	(5,500)	(6,500)	3.7
3. Balance of payments (deficit 2 — 1) ...	3,940(²)	4,185	4,000	2,500	2,000	—3.5
4. Percentage of total imports financed from own exports ...	44	53	65	82	88	

(¹) This classification differs substantially from that used in Chapter VI. Here imports are classified by destination ; in Chapter VI by commodity groups.

(2) Includes Rs. 250 million decline in foreign exchange reserves.

VI. POPULATION POLICY

14. The improvement in living standards, as reflected in the earlier projections of per capita incomes, rests very heavily on certain assumptions regarding the growth of population. The size of population, estimated at 112 million for 1965, is expected to grow at an annual compound rate of about 2.6 per cent during the Perspective Plan (*see* Table 7). With the planned improvement in health facilities and nutritional standards, the mortality rate is likely to decline fairly rapidly. Unless it is checked by a fall in the fertility rate, the population growth rate could easily be pushed beyond 3 per cent per annum. If this happens, population will double itself by 1985. Such an increase would defeat any attempts to raise per capita incomes by a significant amount. One of the basic assumptions of the present projections is that the rate of growth of population will decline after 1975 owing to a decrease in the fertility rate. In other words, it is assumed that declining fertility will more than compensate for declining mortality. The population in 1985 is thus projected at 187 million. A vigorous and broadly-based programme of family planning is, therefore, an integral part of the strategy for the Perspective Plan.

TABLE 7
POPULATION PROJECTIONS

	1949-50	1954-55	1959-60	1964-65	1969-70	1974-75	1979-80	1984-85
East Pakistan	43.0	47.8	53.9	61.3	70.2	80.0	92.8	103.8
West Pakistan	35.8	40.0	45.0	51.1	57.2	65.4	74.3	82.8
All Pakistan	78.8	87.8	98.9	112.4	127.4	145.4	167.1	186.6

VII. FULL EMPLOYMENT

15. The chief objective of the full employment policy is to secure a wider participation in the fruits of economic progress by providing the opportunity for more persons to support their families through useful work. This is not only an obliga-

tion for every society, but will also make a profound contribution towards a more equitable income distribution. The projected growth of the labour force and employment over the Perspective Plan period is summarised in Table 8 below:

TABLE 8

LABOUR FORCE AND EMPLOYMENT: 1965-85

(Million man-years)

	1965	1970	1975	1980	1985
Labour Force	37.25	41.45	46.75	54.00	62.30
Employment	29.70	35.20	44.30	51.40	59.70
(a) Agricultural	(19.30)	(21.80)	(26.70)	(28.20)	(29.50)
(b) Non-agricultural ...	(10.40)	(13.40)	(17.60)	(23.20)	(30.20)
Unemployment as a % of the labour force	20	15	5	5	4

16. Underemployment is fairly widespread in rural areas at present. The labour force is estimated at about 37 million workers in 1965, of whom over 20 per cent would be idle if the rest were to be fully employed. The total number of persons affected is even larger, as unemployment occurs mainly in the form of under-utilization of the available manpower. The rapid growth of population and changes in the age-structure will quickly push up the size of the labour force to over 62 million by 1985, even if one makes fairly conservative assumptions regarding labour-participation rates. If by 1985 only about 4 per cent of the available manpower is left unutilized—which would be a reasonable minimum—then jobs will have to be created for 30 million persons over the Perspective Plan. In the Sixth Plan alone the increase in the labour force will be over 8 million which is more than the entire industrial labour force of France or Germany today. There is no doubt that the problem of full employment will be one of the biggest obstacles to the success of the Perspective Plan. The magnitudes concerned are formidable, and the picture shows wide differences between East and West Pakistan. Nevertheless, precisely because of the numbers involved—*i.e.*, that it brings so many persons into the orbit of economic growth and enables them to share in its benefits—a policy of full employment must be given top priority in the next two decades.

17. Such a policy calls for a careful analysis of the potential of each sector for absorbing more workers. The composition of the development programme, therefore, must be geared to the employment target by making the employment effect of each project a factor in judging its acceptability. It also provides a criterion for analysing the comparative advantages of different techniques of production.

18. The second element in the strategy will be to link employment policy closely with policies relating to education. The pattern of industrialisation that is

envisaged indicates that the demand for labour will, in the years to come, be increasingly concentrated on skilled workers, technicians and high level specialists. Agriculture, too, will require a better-trained and more scientifically-minded worker. The targets of the Perspective Plan in the social sectors, such as the provision of universal primary and secondary education, or of adequate health facilities, will also exert their pressures for the supply of highly-trained personnel. There is already a gap between requirements and availabilities and future demands will greatly add to the calls made on the capacity of the education sector to produce the numbers and quality of labour needed for expanded production activities.

19. Thirdly, the strategy will be to concentrate efforts on those regions where unemployment is worst. It focuses attention on the need to accelerate the programme especially in East Pakistan, where unemployment is most widespread and in the more under-developed areas of West Pakistan. This policy will be closely connected with the Perspective Plan's objective of removing income disparities between the two Provinces. The regional programmes will have to be carefully balanced in order to influence labour productivity in such a way that income-parity and full employment become fully interwoven and mutually consistent targets.

20. Finally, the biggest constraint imposed upon planning for full employment is set by the availability of resources. This will become more serious over the Perspective Plan period because industrial policy will be strongly biased in favour of heavy industry complexes (for balance of payments reasons), whose direct impact on employment is very small. An important element in the employment strategy, therefore, will be to devise policies that will distribute the labour force over these sectors in which the cost of employment is small, such as in the works programme or in small scale industries.

VIII. EDUCATION POLICY

21. The educational targets of the Perspective Plan reflect not only the view that increased education is a benefit to the entire society, but are also chosen for their economic impact. As the Second Plan trenchantly put it: "No illiterate country has ever achieved significant economic development, and an educated community with highly trained leadership does not remain economically backward."

22. The relevant age-groups (6-11 for the primary and 11-14 for the lower secondary stage) show an increase of 10 million and 6 million, respectively, during 1965-85 according to the population projections by age-groups. At the end of

the Second Plan, enrolment will be about 8 million out of a total number of children of school-going age of around 25 million. Universal eight-year education by 1985 means, therefore, that additional facilities for 33 million children have to be provided over the period of the Perspective Plan, *i.e.*, a four-fold increase over the present level.

23. More children actually register in schools than the above figures suggest. In East Pakistan, it is estimated that as many as 50 to 60 per cent of all pupils in Class I drop out before the end of the year. For instance only 18 per cent of the 1958-class I generation reached class V in 1962. In West Pakistan the situation is almost as bad. There are many reasons for the high rate of drop out: transportation difficulties, labour shortage at the time of harvest, sickness and malnutrition, absenteeism among teachers and the child's unhappy experience in Class I, because of crowded buildings and the low standards of teaching.

24. Thus, not only must the numbers of buildings and teachers be increased, but pupil-teacher ratios must be lowered and the general quality of teaching raised. There are other factors, too, which make it particularly difficult to achieve universal education. The most important of these is a widespread lack of interest in the education of girls. This is somewhat less in East Pakistan, where by 1965 about 23 per cent of all girls in age-group 6-11 are expected to be enrolled, than in West Pakistan where the figure is only 14 per cent.

25. On these grounds, it would be too optimistic to expect the achievement of the educational target given by the National Education Commission for reaching universal primary education by 1970 and eight years of elementary education for all by 1975. With regard to primary education it will be possible to reach full enrolment of boys, but it would not be realistic to assume complete female enrolment before 1980. As for the targets relating to the lower secondary classes, it appears possible to reach universal enrolment for boys by 1980, but it is doubtful whether female enrolment can be brought to that level in the last five years of the Perspective Plan.

26. One of the main bottlenecks will be the availability of teacher-training facilities. Absorbing the projected number of pupils will put severe strains on the reservoir of teaching staff and on the institutes that provide additions to this staff. The total number of teachers to be trained during the Perspective Plan period is estimated at about 1.5 million, or 75,000 per annum. This compares with a present teacher-training capacity of around 20,000 per annum.

27. The detailed phasing of the education programme is shown in Table 9.

TABLE 9

ENROLMENT BY STAGE AND REGION: 1960-1985

	East Pakistan		West Pakistan	
	Enrolment (million)	Enrolment in % of age-group	Enrolment (million)	Enrolment in % of age-group
A. The primary stage				
1960	3.28	38	1.95	29
1965	4.20	48	3.10	43
1970	7.31	70	5.85	70
1975	10.93	90	8.64	90
1980	14.23	100	11.18	100
1985	14.80	100	11.92	100
B. The lower secondary stage				
1960	.30	8	.47	16
1965	.42	8	.64	16
1970	.80	15	1.20	29
1975	2.42	40	2.47	50
1980	5.00	70	4.00	70
1985	8.53	100	6.70	100

IX. INCOME DISTRIBUTION

28. One of the primary objectives of the Perspective Plan is to distribute incomes equitably both between East and West Pakistan and within each region. The current disparity in per capita income of East and West Pakistan has to be completely removed over the next 20 years, preferably in a shorter period. The prevailing wide disparities in personal incomes, particularly in the urban areas, must also be contained within limits and incomes distributed more equitably.

29. A possible pattern of regional growth which could equalise per capita incomes by 1985 is presented in Table 10. As can be seen from this table, the growth rate in the regional product of East Pakistan will have to be accelerated from the past rate of 5.4 per cent to over 8 per cent during the next 20 years. The growth rate of West Pakistan will have to be stabilised somewhere around 6 per cent. This

pattern of growth naturally raises many difficult questions of policy which are being examined at present. On the one hand, it has to be ensured that the necessary institutional framework is created and investment policies followed in order to achieve the proposed growth rates in East Pakistan. On the other, the Perspective Plan period should not end with growth rates in East and West Pakistan which increase disparities in the reverse direction. The strategy for investment, saving and balance of payments is currently being worked out separately for the two regions in the light of the above considerations.

TABLE 10

PATTERN OF REGIONAL GROWTH IN THE PERSPECTIVE PLAN

(1964-65 prices)

Year	Per Capita Income (Rs.)			Growth Rate in Regional Products (%)		
	East Pakistan	West Pakistan	Total	East Pakistan	West Pakistan	Total
1959-60	297	391	340	5.4	5.0	5.2
1964-65	340	442	386	7.0	6.1	6.5
1969-70	416	531	467	8.3	6.2	7.3
1974-75	537	627	577	8.6	6.3	7.5
1979-80	709	750	727	8.1	6.8	7.5
1984-85	932	932	932			

30. Very little information is available at present about personal income distribution in Pakistan. Some of the information available from the C.S.O. Sample Surveys for rural areas and for Karachi is put together in Table 11. Of course, these data are not fully representative, but they are sufficiently accurate for indicating very broadly the existing inequalities.

TABLE 11

AN ESTIMATE OF INCOME DISTRIBUTION IN PAKISTAN: 1959-60

(Rupees; 1964-65 prices)

Percent of total population	East Pakistan rural	West Pakistan rural	Karachi
5% lowest income group	186	203	80
45% lower middle income group	222	276	211
45% upper middle income group	368	398	624
5% highest income group	686	995	2,165
Average income	309	363	488

These data bring out wide disparities in the lowest and highest income groups, particularly in the urban areas. At the same time, it is clear from the table that even the so-called "highest" income groups do not enjoy a very high income by international standards. Obviously, the strategy for distribution of incomes has to concentrate more on an increase in incomes in the lower brackets through a rapid increase in production and employment rather than through a drastic redistribution of existing incomes. The scope for the latter exists but there are definite limits within which this policy can be pursued without adversely affecting capital formation in the economy.

31. In conclusion, it must be reaffirmed that the estimates given in this Chapter are tentative. Detailed work is currently proceeding on these estimates and the strategy of the Perspective Plan will be given a more concrete shape in the light of this work.

CHAPTER III

STRATEGY OF THE THIRD PLAN

The strategy of the Third Plan flows from the lessons learnt from planned development during the past 15 years and the targets set for the next 20 years under the Perspective Plan. As discussed in Chapter I, the past 15 years have witnessed a rapid rate of economic development and building up of infra-structure but there are certain imbalances, especially in agriculture, education and social services, which have to be removed. The framework of the Perspective Plan, which is discussed in Chapter II, defines the general direction in which the economy is expected to move in the next two decades. The basic rationale of the Third Plan has been formulated both in relation to past experience and future targets.

I. GROWTH RATE STRATEGY

2. The growth targets for the Third Plan should naturally be as high as the country can hope to implement. The annual average growth rate achieved in the Second Plan is estimated at 5.2 per cent but the rate of growth is accelerating and the period is expected to end with a trend growth rate of 5.7 per cent. It is both desirable and feasible to accelerate this growth rate to 6.5 per cent over the Third Plan period. The acceleration will come mainly from the agricultural sector where the growth rate is likely to increase from an average of 3.5 per cent in the Second Plan to 5.0 per cent in the Third. In fact, the growth rates postulated in the non-agricultural sectors are about the same as already experienced in the Second Plan. The target of 6.5 per cent growth rate in the GNP for the Third Plan period also fits in with the projected long-term growth rate of 7.2 per cent under the Perspective Plan. Thus, the Third Plan will mark a transition from past achievements to future targets.

3. The pattern of growth in the Third Plan is mainly an extension of the Second, with the crucial difference that agriculture is expected to play a far more dynamic role in future than it has in the past. The mainspring of this growth will be the tremendous increase projected in the inputs for the agricultural sector, especially the availability of water, fertilizer and credit. During the Second Plan period, the rate of growth was 3.5 per cent in agriculture, 8.6 per cent in industry and 6.7 per cent in construction, transport and other services. Compared to these growth rates, the Third Plan projects an annual increase of 5.0 per cent in agriculture, 10.0 per cent in industry and about 7.1 per cent in the other sectors. It should be noted that, while the role of the agricultural sector will increase compared to the Second Plan, its proportionate contribution to the GNP is likely to decline. Of the additional income during the Third Plan period, nearly 65 per cent is expected

to come from the non-agricultural sectors. Thus, the structural changes discussed in Chapter I, reflecting the gradual industrialisation of the economy, will continue during the Third Plan.

II. INVESTMENT STRATEGY

4. The investment effort required during the Third Plan has been determined from the growth targets both on the basis of the experience regarding the sectoral capital-output ratios in the implementation of the Second Plan and by evaluating the costs of detailed projects and programmes included in the Third Plan. An increase in the capital-output ratio during the Third Plan period is almost inevitable since relatively more emphasis is going to be placed on heavy industry and on creating infra-structure in East Pakistan to accelerate the growth of that region. Moreover, welfare programmes in the fields of education, health and social services claim a higher allocation in the Third Plan but physical returns from these programmes are not very high in the short run. The rising trend in the capital-output ratio will be moderated to some extent by the external economies generated by the infra-structure already built in the first two Plans, by the further liberalization of raw material imports which will permit greater utilization of industrial capacity, and by a continuous improvement in the efficiency of the public and private sectors, but it is unlikely that these developments will completely neutralise the expected rise.

5. The Third Plan envisages an increase of about 68 per cent in development expenditure over the five-year period, an annual compound rate of about 11 per cent. This rate of increase is lower, in fact, than the 18 per cent annual increase achieved during the past five years. However, effective implementation of the development programme in the Third Plan will require continued improvement in the implementation capacity of public and private sectors since the base from which the Third Plan starts is much higher than in the previous Plans. Also, the planned rate of increase in development expenditure is much sharper in East Pakistan — about 18 per cent per annum — where substantial improvement in absorptive capacity is required for the successful implementation of the proposed programmes.

6. The share of public and private sectors in total investment continues to be about the same as that actually implemented in the Second Plan, during which the private sector was well ahead of the target: the allocation therefore projects a continuation of the dynamism shown by the private sector. However, the role assigned to public and private sectors is different in the two regions. The public sector will play a much larger role in East Pakistan where substantial infra-structure has yet to be built and the private sector is still rather shy. This is particularly evident in the field of industry where about half of the investment is to be managed by the East

Pakistan Industrial Development Corporation as against just over one-fifth by its West Pakistani counterpart. A definite effort will be made in the course of the Third Plan to stimulate private investment in East Pakistan through differential fiscal incentives, distribution of foreign loans through PICIC and IDBP and through the formulation of the industrial investment schedule for the private sector policies regarding foreign assistance licensing and location of industry.

III. SAVING STRATEGY

7. The Third Plan must maintain a very high marginal rate of saving so as to improve the average saving rate of the economy and to progressively reduce Pakistan's dependence on foreign assistance. It is estimated that during the Second Plan the country saved about 22 per cent of the additional income. As a result, the average saving rate is expected to increase from about 6 per cent in 1959-60 to over 10 per cent in 1964-65. The Third Plan postulates a marginal rate of saving of 22 per cent which will raise the average saving rate to 13.6 per cent by the end of the Plan. This is a fairly ambitious target even though it is encouraging to note that the record of the Second Plan is quite good in this respect.

8. There are four main elements in the strategy for mobilising domestic savings. First, it is clear that the distribution of national product in the Third Plan should be such as to favour the saving sectors. The saving [illegible] so far has been identified almost exclusively with large-scale industry which was growing at a rapid rate of 15 per cent per annum during 1950-65 and was saving and re-investing nearly 75 per cent of its profits. The base of this saving effort has to be broadened now. The pattern of growth in the Third Plan envisages that over one-third of the additional output will be in agriculture. Again, the policies contemplated in the Third Plan aim at a more equitable distribution of incomes. Both these developments will imply that saving effort has to be squeezed out of sectors which traditionally have not made a sizeable contribution to the overall rate of savings. The recent evidence, however, is reassuring. In the agricultural sector, the private investors are already spending a part of increasing incomes on the acquisition of tube-wells, fertilizers, tractors and other means of improving agricultural productivity. So far as the other sectors of the economy are concerned, the recent development of the institutional framework, particularly the capital market, and its extension over a wider area, including the heretofore untouched rural areas, should be of great help in the saving effort. Already, a sizeable transfer of savings is taking place through the rural branches of the commercial banks to the urban centres. The planned extension of the branches of the Agricultural Development Banks to the far flung corners of the countryside and the proposed acceptance of deposits by these branches will further encourage the mobilisation of rural savings.

9. Second, despite the slight decrease in its proportionate share in the additional GNP during the Third Plan period, the industrial sector will continue to play a leading role in mobilisation of domestic savings. It is expected that industry will contribute nearly one-fifth of the additional national product during the Third Plan. This will still permit the industrial sector to have a decisive influence on the marginal rate of saving. In fact, as the base from which the industrial sector starts has expanded considerably, the contribution of this sector to the saving effort will be of critical importance. It is true that increasing competition in a liberalised economy and the proposed shift to more complex and long-gestation period industries may tend to reduce industrial profits per unit of output but these developments are not likely to have a significant effect in quantitative terms. In fact, the emphasis of the industrial sector on intermediate and capital goods should be helpful for the saving effort. The past experience, particularly during the First Plan period, shows that it is fairly difficult to obtain a high rate of saving from the economy by concentrating on the production of consumer goods and by hoping to export the products of these industries to finance capital goods imports. The limitation is imposed both by the demand in the international market for Pakistan's industrial exports and by the domestic pressures for higher consumption levels which emerge when the capacity for consumer goods industries is expanded. It is a better strategy to limit the expansion of the capacity of the consumer goods sector in the very first instance and to deny the economy the temptation of an unplanned increase in its consumption.

10. Third, a high marginal rate of saving is also implicit in the targets set for additional export and imports. The import system has been geared in favour of development imports so that about 63 per cent of additional imports during the Third Plan period will consist of capital goods and raw materials for capital goods. This means that the additional exports of Rs. 6,750 million proposed for the Third Plan will be transferred mainly into investment through the balance of payments mechanism.

11. Finally, an effort will be made during the Third Plan period to increase the Government's fiscal contribution to development. Both the proportion of the GNP withdrawn by the public sector in the form of taxes and other receipts and the proportion of government revenue devoted to development (*i.e.*, the revenue surplus) will be increased. Government revenues are expected to rise by 70 per cent during the Third Plan, about twice the rate of increase in the GNP. At the same time the revenue surplus (including the effect of new taxes) will increase from 25 to 32 per cent of government revenues. The Government's marginal rate of saving from its revenue will be over 40 per cent.

IV. BALANCE OF PAYMENTS STRATEGY

12. The main aim of the balance of payments strategy in the Third Plan is to prepare the economy for a gradual reduction in the need for foreign assistance and

to move towards greater economic viability. There are three main elements in this strategy. Firstly, it is proposed that exports should increase at a rate faster than the GNP. Thus, the planned rate of increase in exports is 9.5 per cent per annum compared with the target of 6.5 per cent increase in the GNP. The increase in exports is expected mainly in manufactured goods and in non-traditional items like rice and fish. This means that particular emphasis will have to be placed on the efficiency of the industrial sector from which increased output and increased exportable surpluses in manufactures are to be obtained. Also, the scale at which industries are established in future will have to be geared more closely to the possibilities of capturing export markets rather than based entirely on the domestic market which for many of the new products will be rather limited for the next few years.

13. Secondly, the import substitution effort will have to be intensified, particularly in capital goods and in intermediate products, like base metals, chemicals, petroleum products and non-metallic minerals. As discussed in Chapter II, the domestic output of capital goods will have to be increased about 7 times in the next 20 years in order to meet the requirements of the investment levels planned for the future. The Third Plan will make a decisive move in this direction.

14. Finally, it is necessary to economise on the use of foreign exchange by developing an appropriate technology adapted to the resource endowment of the country. The scarcity price of foreign exchange should be appropriately reflected to the economy so that there is an incentive to use less foreign exchange and more domestic resources. This will call for a revision in the present tariff policy, re-examination of the current interest rate structure and use of shadow prices for the appraisal of at least the major projects in the Third Plan. It is also intended to intensify investments in the exploration and exploitation of fuels and minerals in order to replace some of the current imports by indigenous raw materials and substitutes.

V. REGIONAL STRATEGY

15. The disparity in regional per capita incomes must be removed over the Perspective Plan period, *i.e.*, by 1985. The Third Plan proposes an increase of 40 per cent in the regional income of East Pakistan and 35 per cent for West Pakistan, compared to 30 and 28 per cent respectively in the Second Plan. This implies a greater acceleration in the rate of growth of East Pakistan than of West Pakistan. It should be recognized that there is no neat way of arranging a particular pattern of regional growth. Resource allocations, import policies, fiscal incentives and disincentives will all have to make their contribution. On the basis of past experience, it is estimated that a development expenditure of Rs. 27,000 million in East Pakistan and Rs. 25,000 million in West Pakistan can achieve the proposed growth rates.

given appropriate policies. The identification of growth possibilities in the two regions and the detailed programmes which are being prepared to realize them, lends support to these estimates. Naturally, the proposed acceleration in the level of development expenditure is much sharper (18 per cent per annum) in East Pakistan compared with West Pakistan (5 per cent). This has obvious implications for the distribution of foreign assistance between the two regions and the need for a real transfer of resources from West to East Pakistan.

VI. EMPLOYMENT STRATEGY

16. The increase in employment opportunities in the past has not kept pace with the increase in labour force. During the 1950's, less than 70 per cent of the increasing labour force was being absorbed by the pace of the development programme so that unemployment is estimated to have increased from 5.6 million in 1951 to 7.6 million in 1961. The quickening of the pace of investment and output in the Second Plan ensured for the first time that almost the entire increase in the labour force during the Plan period will be absorbed and no further deterioration occur in the absolute amount of unemployment. The Third Plan will go one step further and reverse the past trends: it will not only absorb the additional labour force but cut the back-log of unemployment by about 17 per cent. Besides an acceleration in the tempo of development, considerable emphasis will be given to labour-intensive programmes and to building up a competent organisation for the proper use of the abundant manpower resources of the country. Technical training facilities will be spread at a rapid rate so that the labour force is properly equipped for the kinds of jobs which will be created during the Third Plan period. The tempo of the works programme will also be stepped up since it takes only a modest capital expenditure to extend employment opportunities through this programme and the additional jobs will be created mainly in the rural areas where the problems of under-employment are acute. It is expected that by the last year of the Third Plan there will be about 5.5 million additional jobs, of which nearly one million will be in the manufacturing sector, 2.5 million on the newly irrigated and improved agricultural lands, about 400 thousand through the rural works programme and another 1.6 million in other services and ancillary industries.

VII. ALLOCATION STRATEGY

17. The pattern of allocation of investment funds emerges from the various elements of development strategy discussed above. If the rate of growth is to be accelerated to 6.5 per cent per annum, if a high marginal rate of saving is to be obtained, if manufactured exports are to be encouraged, if import substitutes are to be found for capital goods, and if population is to be taken off the already over-populated land, it is almost inevitable that the industrial sector should play a

leading role in the economy even when the pace of agricultural growth is accelerated. This is basically the choice made in the Third Plan. Of the total allocation, as much as 26 per cent is earmarked for industry and nearly two-thirds of this will be spent on capital goods industries and intermediate products. In the agricultural sector, a careful analysis has been carried out of all the physical inputs required for agricultural production and an adequate provision made for them in the Plan. The allocations to other sectors have been decided on the basis of the considerations of consistency and efficiency.

18. The various elements of strategy discussed above are not necessarily compatible. It always takes great skill to reconcile the inevitable conflicts in policy objectives. The strategy outlined above brings out the manner in which some of the problems have been tackled within the framework of the Third Plan.

leading role in the economy even when the rate of agricultural growth is accelerated. This is basically the choice made in the Third Plan. Of the total allocation, as much as 25 per cent is earmarked for industry and nearly two-thirds of this will be spent on capital goods industries and intermediate products. In the agricultural sector, a careful analysis has been carried out of all the physical inputs required for agricultural production and an adequate provision made for them in the Plan. The allocations to other sectors have been decided on the basis of the considerations of consistency and efficiency.

18. The various elements of strategy discussed above are not necessarily compatible. It always takes great skill to reconcile the inevitable conflicts in policy objectives. The strategy outlined above brings out the manner in which some of the problems have been tackled within the framework of the Third Plan.

CHAPTER IV

OBJECTIVES, SIZE AND STRUCTURE

I. PLAN OBJECTIVES

The objectives of the Third Plan have been formulated within the framework of the 20-year Perspective Plan (1965-85) and in the light of the achievements and shortfalls of the previous two plans. The principal objectives set for the Third Plan are:

(*i*) To attain a rapid growth of the national economy with a view to ensuring a break-through to self-sustained growth in the shortest possible time. It is proposed to aim at a minimum increase of 37 per cent in gross national product at constant prices over the Third Plan, as compared to 29 per cent in the Second Plan. The annual rate of increase is projected at 6.5 per cent per annum in the Third Plan as against 5.2 per cent in the Second Plan.

(*ii*) To reduce the degree of inter-regional and intra-regional disparity. It is proposed to reduce the existing level of disparity in income per head between East and West Pakistan by increasing total income by 40 per cent and 35 per cent respectively in the two regions.

(*iii*) To provide at least 5.5 million new job opportunities to absorb the entire increase in the labour force during the next five years as well as reduce the existing level of unemployment by over one-sixth.

(*iv*) To strengthen the balance of payments of the country by increasing the country's foreign exchange earnings at a rate faster than the GNP and by driving ahead with import substitution. It is expected that the country's earnings of foreign exchange will reach a level of Rs. 4,800 million by 1970 compared with about Rs. 3,050 million at the end of the Second Plan.

(*v*) To develop basic industries for the manufacture of producer goods so that the requirements of further industrialisation can be met mainly from the country's own capacity.

(*vi*) To accelerate the transformation in agriculture which is now taking place by placing the highest priority on measures to increase acre yields and by maintaining strong farm incentives, and subsidies to ensure maximum realization of the farmers resources.

(*vii*) To arrest the menacing growth of population by taking decisive steps towards population control.

(*viii*) To provide better housing, more health services, and greater facilities for education, especially for the lower income groups.

(*ix*) To make substantial progress towards achieving certain specific social objectives such as diminishing inequalities in the distribution of income, wealth and economic power, providing a measure of social security and promoting social and cultural change conducive to accelerated economic expansion.

2. Conflicts of objectives are inevitable in any plan which runs the entire gamut of the social and economic life of a country; their reconciliation is always a delicate and difficult task. These objectives, only some of which can be defined in quantitative terms, are not necessarily compatible. The requirements for rapid economic growth are, to some degree, in conflict with social and political objectives. It is to rapid growth that the nation must look to free itself from poverty, disease, ignorance and inequalities. The nation must push forward to attain the highest rates of growth which lie within its powers. However, the growth already achieved and that which can confidently be predicted now makes it possible during the Third Plan to give greater weight to the requirements of social and economic justice without sacrifice of essential growth.

II. SIZE OF THE PLAN

3. A development programme of Rs. 52,000 million is proposed for the Third Five-Year Plan. A Plan of this magnitude is necessary to maintain the rising tempo of development which has already been built in the economy and to attain the main objectives of the plan. It is also in harmony with the country's long-range strategy of accelerating the growth rate without an undue strain on consumption. The suggested development expenditure is expected to lead to an annual rate of growth of 6.5 per cent compared with 5.2 per cent during the Second Plan period and the target of an average rate of 7.2 per cent for the Perspective Plan. In determining the size of the plan, due consideration has been given to the expected availability of financial resources and the capacity of the country for effective implementation.

4. The development programme of the public sector is proposed to be Rs. 30,000 million and of the private sector Rs. 22,000 million. In order to implement a net programme of Rs. 30,000 million in the public sector, sectoral programme totalling up to Rs. 34,500 million have been drawn up so far. This would provide a certain degree of flexibility in programming and facilitate the preparation of a larger portfolio of projects, particularly for negotiating foreign assistance.

III. SECTORAL ALLOCATIONS

5. The sectoral breakdown of the development programme of Rs. 52,000 million is shown in Table 1. The rate of acceleration over the estimated expenditure in different sectors during the Second Plan is also shown in the Table:

TABLE 1

SECTORAL ALLOCATIONS IN THE THIRD PLAN

(in percentages)

Sector	Second Plan (Estimated Expenditure)	Third Plan (Proposed Allocation)	Increase in Third Plan over the Second Plan Outlay
Agriculture	13.3	15.4	128
Water and power	18.6	15.1	60
Industries, fuels and minerals	27.6	25.9	85
Physical planning and housing	14.8	12.7	70
Transport and communications	17.1	18.2	110
Education	3.8	5.1	165
Health	1.5	2.3	203
Manpower and social welfare	0.3	0.5	238
Works programme	3.0	4.8	213
Total	100.0	100.0	97

6. In determining the allocations for different sectors, such factors as likely contribution of the sector to the attainment of the plan objectives, past performance and potential for future growth, likely impact on savings and investments and internal consistency of the programmes have been taken into account. At the present stage of the plan preparation, however, the proposed allocations are tentative and provide a broad framework for preparing development programmes by various sponsoring agencies. After detailed programmes have been drawn up and related to the respective physical targets, the sectoral allocations may have to

be reviewed further. The plan size of Rs. 52,000 million is inclusive of expenditure on works programme and on anti-waterlogging and salinity measures in West Pakistan. The expenditure on Indus Basin replacement works will continue to be outside the plan framework as it is covered by a special treaty.

IV. REGIONAL DISTRIBUTION

7. Of the total plan size of Rs. 52,000 million, Rs. 27,000 million is allocated to East Pakistan and Rs. 25,000 million to West Pakistan. The regional distribution of the total plan expenditure, in the public and private sectors, is shown in Tables 2, 3 and 4.

TABLE 2

REGIONAL DISTRIBUTION OF THE TOTAL THIRD PLAN ALLOCATION
(Rs. Million)

	East Pakistan	West Pakistan	Total
Government financed programme	16,000	14,000	30,000
Private investment	11,000	11,000	22,000
	27,000	25,000	52,000

8. The allocations for different sectors of the Government financed programme and its regional distribution flow directly from the objectives and strategy of the plan. The relative emphasis on development programmes of various sectors differs in the two wings for a number of reasons, like geographical conditions, the nature of agricultural problems, stage of development and extent of urbanization. Water and power sector, for example, accounts for nearly 29 per cent of the public sector allocations in West Pakistan, whereas the corresponding allocation in East Pakistan is 21 per cent.

TABLE 3

REGIONAL DISTRIBUTION OF PUBLIC SECTOR ALLOCATIONS

(Rs. Million)

Sector	East Pakistan		West Pakistan		All Pakistan	
	Allocation	Percentage	Allocation	Percentage	Total	Percentage
1. Agriculture ...	2,385	13.0	2,285	14.1	4,670	13.5
2. Water and power ...	3,790	20.7	4,610	28.4	8,400	24.4
3. Industry ...	3,100	17.0	1,370	8.4	4,470	13.0
4. Fuels and minerals ...	360	2.0	330	2.0	690	2.0
5. Transport and communications ...	3,205	17.5	3,255	20.1	6,460	18.7
6. Physical planning and housing ...	1,585	8.7	1,440	8.9	3,025	8.8
7. Education ...	1,495	8.2	1,235	7.6	2,730	7.9
8. Health ...	715	3.9	615	3.8	1,330	3.9
9. Social welfare ...	75	0.4	50	0.3	125	0.4
10. Manpower ...	70	0.4	30	0.2	100	0.3
11. Works programme ...	1,500	8.2	1,000	6.2	2,500	7.2
Total	18,280	100.0	16,220	100.0	34,500	100.0
Less: expected shortfall ...	—2,280		—2,220		—4,500	
Total programme ...	16,000		14,000		30,000	

The relatively larger percentage share in West Pakistan for this sector is due to the necessity of completing a large number of on-going schemes and substantial requirements of water-logging and salinity programme. On the other hand, while industry accounts for 17 per cent of the public sector allocations in East Pakistan, the corresponding percentage in West Pakistan is 8. The higher public investment in industry in East Pakistan is necessitated by the relative paucity of entrepreneurial talent and private capital in that province and the objective of achieving a balance in industrial development of the two wings as early as possible. Social sectors like housing, education, health and social welfare, account for 21 per cent of the public sector allocation in both East and West Pakistan. There are also considerable differences between the intra-sectoral priorities; for example, in East Pakistan, there is greater emphasis on roads and inland water transport whereas in West Pakistan, expansion of roads and road transport and rehabilitation and improvement of railways will claim a major portion of the total allocation in the public sector.

9. The distribution of the Government-financed expenditure by executing authorities is given in Table 4. The gross allocation for the Government of East Pakistan will be Rs. 16,240 million, compared to an estimated expenditure of Rs. 5,686 million during the Second Plan, *i.e.*, an increase of 186 per cent; the corresponding increase for the Government of West Pakistan will be only 133 per cent *i.e.*, Rs. 13,830 million compared to Rs. 5,923 million during the Second Plan. The bulk of the Central programme of Rs. 4,430 million is in three sectors, *i.e.*, transport and communications, physical planning and housing, and fuels and minerals and includes the development of tele-communication and postal facilities, broadcasting and television, civil aviation and ports, the construction of capitals at Islamabad and Dacca, geographical surveys, atomic energy and certain research and training programmes of other sectors. It also includes development projects of the Special and Northern Regions.

TABLE 4

SECTORAL ALLOCATIONS BY EXECUTING AUTHORITIES

(Public Sector)

Sector	East Pakistan	West Pakistan	Centre	Total
1. Agriculture	2,090	2,190	390	4,670
2. Water and power	3,700	4,350	350	8,400
3. Industries	3,000	1,220	250	4,470
4. Fuels and minerals	100	90	500	690
5. Transport and communications	2,400	2,260	1,800	6,460
6. Physical planning and housing ...	1,260	945	820	3,025
7. Education	1,400	1,150	180	2,730
8. Health	660	560	110	1,330
9. Social welfare	65	40	20	125
10. Manpower	65	25	10	100
11. Works programme	1,500	1,000	—	2,500
Total	16,240	13,830	4,430	34,500
Less: expected shortfall				— 4,500
Total				30,000

V. PRIVATE SECTOR ALLOCATIONS

10. A development programme of Rs. 22,000 million is proposed in the private sector which is about twice as high as the estimated investment in the Second Plan. During the First and Second Plan periods, the private sector displayed considerable vitality and dynamism, particularly in sectors like industry, transport and housing, and total private investment has exceeded the plan targets in both these periods. The proposed allocations for the Third plan are based on the assumption that, following the recent liberalization of import and investment controls and improvements in the institutional framework for savings and investments, private economic activity would gather further momentum during the Third Plan period, particularly in East Pakistan. A tentative regional and sectoral break-up of the proposed private sector development expenditure is set out in Table 5 below.

TABLE 5

REGIONAL DISTRIBUTION OF PRIVATE SECTOR ALLOCATIONS

(Rs. million)

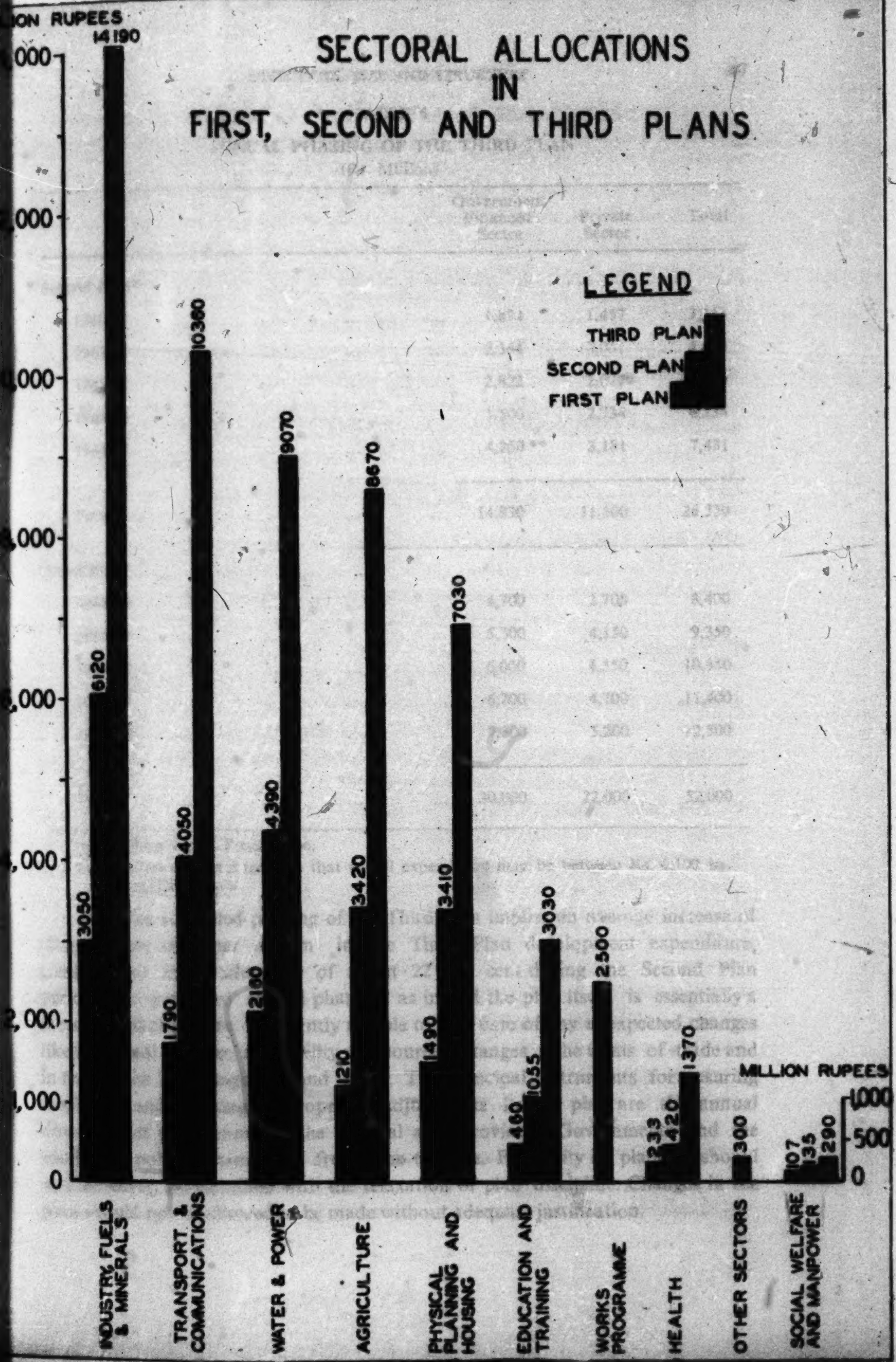
Field of Development	East Pakistan	West Pakistan	Total
1. Agriculture	2,100	1,900	4,000
2. Water and power	100	550	650
3. Industry	3,800	4,500	8,300
4. Fuels and minerals	300	450	750
5. Transport and communications	2,100	1,800	3,900
6. Physical planning and housing	2,350	1,650	4,000
7. Education	200	100	300
8. Health	20	20	40
9. Manpower	10	10	20
10. Social welfare	20	20	40
	11,000	11,000	22,000

11. The bulk of allocations in the private sector are proposed for industry, housing, transport and communications. An allocation of Rs. 8,300 million or 38 per cent of total private sector programme is earmarked for industry which in absolute terms will be nearly double the estimated private investment in industry during the Second Plan. In West Pakistan, except for certain key producer goods and heavy industries like fertilizer, machine-tools, and ship-repairing, all other industries like food processing, textiles, hard-board, chemicals and cement will be developed in the private sector. In East Pakistan, as the private capital is comparatively inadequate, some of the industries like sugar, jute manufacturing, newsprint and hard-board, chemicals, cement and steel will be initiated in the public sector with maximum available private participation. The private sector housing programme accounts for 18 per cent of the allocation and will include the programmes of the local bodies and development authorities, House Building Finance Corporation, industrial and co-operative housing, commercial buildings and private housing. The allocation for private housing in East Pakistan is higher because of acute shortage of housing particularly in the rapidly growing urban areas and higher costs of construction. The private sector transport and communications programme accounts for another 18 per cent of the allocations and will include the programmes of Port Trusts of Karachi and Chittagong, road transport, inland water transport, shipping, P.I.A.Television Corporation and tourism. Provision has also been made in the water and power programme for 40,000 additional private tube-wells.

12. The allocations proposed for the private sector should be viewed as broad expenditure targets based on the plan objectives and priorities rather than as centrally determined specific programmes. Private investment decisions will be made by a large number of people, influenced by market considerations and by incentives or disincentives provided by public policy, including tax policy, some controls over investment and tariff policies which will influence the allocation of foreign exchange. The purpose of indicating a tentative break-up of private development outlay in the plan is not to tie the private sector in a straight-jacket but to provide guide-lines for the private investor as well as public authorities, and also to show the relationship between private and public development expenditures.

VI. ANNUAL PHASING

13. The anticipated annual phasing of the Third Plan compared to the development expenditure in each year of the Second Plan, including the Works Programme, is shown in Table 6.



SECTORAL ALLOCATIONS IN FIRST, SECOND AND THIRD PLANS [illegible] housing, transport and communications. An allocation of Rs. [illegible] million or [illegible] per cent of total private sector programme is earmarked for industries, [illegible] absolute terms will be nearly double the estimated [illegible] during the Second Plan. In West Pakistan, [illegible] goods and heavy industries like fertiliser, [illegible] "B" [illegible] like food processing, [illegible] and cement will be developed in the private sector. In East Pakistan, [illegible] private sector with [illegible] private sector housing programme accounts for [illegible] per cent [illegible] and will include the programmes of the local bodies and [illegible] House Building Finance Corporation, industrial [illegible] commercial buildings and private housing. The allocation for [illegible] Pakistan is higher because of [illegible] growing urban areas and bigger [illegible]. The private [illegible] and communications programme [illegible] tions and will include the programmes of [illegible] road transport, inland water transport, shipping, P.I.A. [illegible] tourism. Provision has also been made in [illegible] 40,000 additional primary [illegible]

12. The allocations proposed for the private sector [illegible] investment [illegible] based on the [illegible] sectoral programmes. Private [illegible] made by a large number of people [illegible] incentives or disincentives provided [illegible] over [illegible] and [illegible] foreign exchange [illegible] provide guide [illegible] to show the relation [illegible]

13. [illegible] Programme, is shown in Table 6.

TABLE 6

ANNUAL PHASING OF THE THIRD PLAN

(Rs. Million)

	Government Financed Sector	Private Sector	Total
Second Plan*			
1960-61	1,894	1,457	3,351
1961-62	2,364	2,051	4,415
1962-63	2,822	2,077	4,899
1963-64	3,500	2,734	6,234
1964-65	4,250 **	3,181	7,431
Total	14,830	11,500	26,330
Third Plan*			
1965-66	4,700	3,700	8,400
1966-67	5,300	4,150	9,350
1967-68	6,000	4,350	10,350
1968-69	6,700	4,700	11,400
1969-70	7,300	5,200	12,500
Total	30,000	22,000	52,000

* Including Works Programme.

** The latest estimates indicate that actual expenditure may be between Rs. 4,100 to Rs. 4,150 million.

14. The suggested phasing of the Third Plan implies an average increase of about 11 per cent per annum in the Third Plan development expenditure, compared to an acceleration of about 22 per cent during the Second Plan period. The proposed annual phasing, as indeed the plan itself, is essentially a forecast and should be sufficiently flexible to take care of any unexpected changes like abnormal weather, availability of resources, changes in the terms of trade and in the inflow of foreign aid and loans. The principal instruments for ensuring flexibility and making appropriate adjustments in the plan are the annual development programmes of the Central and Provincial Governments and the economic policies formulated from time to time. Flexibility in planning should not, however, be identified with the relaxation of plan discipline. Changes in the plan should not be allowed to be made without adequate justification.

VII. PROGRAMME PRIORITIES AND PHYSICAL TARGETS

15. The inter-sectoral allocations in the Third Plan are closely knit with the central objective of the Third Plan to increase Gross National Product by 37 per cent and with the targets set for each field of development on the basis of its past performance and growth potential. The sectoral priorities in the Third Plan compared with the order of priorities followed in the past 15 years are shown in Table 7 below.

TABLE 7

SECTORAL PRIORITIES IN DEVELOPMENT EXPENDITURE

1950-70

(Percentages)

Fields of Development	Pre-Plan (1950-55)	First Plan (1955-60)	Second Plan (1960-65)	Third Plan (1965-70)
1. Agriculture	6	7	13	15
2. Industry, fuels and minerals ...	36	31	28	26
3. Water and power	13	17	19	15
4. Transport and communications ...	14	17	17	18
5. Physical planning and housing ...	22	20	15	13
6. Education	5	6	4	5
7. Health	3	2	1	2
8. Manpower and social welfare ...	1	...	Neg.	1
9. Works programme	...	...	3	5
	100	100	100	100

16. The table brings out clearly the basic strategy that the development plans have followed so far. Upto the end of the Second Plan, an increasing share of the total expenditure has gone into the strengthening of economic overheads, particularly water and power and transport and communications, but a relative decline in the weight of these sectors in total allocations is clearly discernable for the Third Plan period. There is a corresponding increase in allocations to agriculture and to social overheads, particularly education. The share of industry, which is getting smaller and smaller in every subsequent Plan, will be about 24 per cent of the total allocation for the Third Plan. The expenditure on housing has not been allowed to grow proportionately with total development expenditure in order to release resources for more directly productive sectors. A summary of the main physical targets is given in Appendix A. The basic strategy to be followed in each sector during the Third Plan is outlined in the following paragraphs.

AGRICULTURE

17. Considerable progress has been made during the Second Plan in establishing a strategy for agricultural development, in defining agricultural policies, and in strengthening the organizational and institutional framework for agriculture. For the Third Plan, major reliance will continue to be placed on the initiative of individual farmers, while at the same time, every encouragement will be given to co-operation. Incentives will be provided to encourage investment and the use of improved inputs mainly through subsidies and in special cases through fixing the floor prices and buffer stock operations will be expanded. Storage facilities will be expanded which, together with marketing facilities and the price stabilization measures, will ensure fair prices to the farmers as well as the consumers; this will help maintain reasonable prices in urban centres. Cropping patterns will be developed through farmers education and increased supplies of various units to encourage better use of soil and water and to increase the incomes of farmers. Every encouragement will be given to the export of those crops in which the country enjoys, or can develop, a comparative advantage in world trade. Increased provision will be made for all inputs — water, fertilizer, improved seed, plant protection and farm implements. However, highest priority will be given to water and fertilizer which account, in larger part, for the growth achieved during the Second Plan, and which experience now shows, yield the largest and quickest returns. Fertilizer programmes will be expanded to the extent feasible during the Third Plan. If the large increases in fertilizer production provided in the industrial sector is insufficient, resources will be provided for imports. The government subsidy on fertilizer will continue throughout the Third Plan, but this policy will be reviewed periodically. Distribution of fertilizer will be shared by the ADC's, the Co-operatives and private trade. Competition between these agencies will ensure distribution efficiency. Major improvements

will be made in the supply and terms of credit to support the rapidly increasing investment. The extension service will be strengthened by increasing the numbers and improving the training programmes. The extension service freed of responsibilities for distribution of farm supplies will be able to concentrate on improvement of farm practices and management. Provisions will be made for enlarged and improved programmes of agricultural education and research. These long-gestation programmes which make only a modest contribution in the short run, provide the indispensible basis for the agricultural technology of the future. In summary, every effort will be made to strengthen the agricultural organizations and programmes in all their diverse and complex aspects. However, this will be done without diffusion of effort and with highest priority on the quick-response factors. This agricultural strategy during the Second Plan has raised the growth rate in agriculture from 1.3 per cent per annum in the decade of the 1950s to 3.5 per cent per annum during the Second Plan period. Based on this experience and on the larger programme of improved inputs, a target of 5.0 per cent growth in agricultural value added has been established for the Third Plan. This period should witness a transformation of Pakistan's agriculture.

WATER AND POWER

18. The development of water and power resources is of vital importance to both agricultural and industrial growth. In the field of water development, the programme will cover maximum possible irrigation facilities and try to meet the menacing threats of water-logging and salinity in West Pakistan and flood control in East Pakistan. It is proposed to irrigate an additional area of 5.7 million acres and improve an area of 20.3 million acres through drainage, flood-protection anti-waterlogging and salinity and other measures. It is proposed to increase the power capacity installed by 1,453 MW, from 1,435 MW in 1964-65 to 2,888 MW in 1969-70.

INDUSTRY

19. The main objectives of the industrial programme will be placed on immediate development of export capability and to consolidate the earlier efforts at import substitution. Within the field of import substitution major emphasis will be on producer goods industries in order to meet the country's growing requirements of capital goods and machinery by domestic production. It is expected that the domestic production of capital goods will increase from about Rs. 1,080 million in 1965 to Rs. 1,650 million by 1970. The industrial programme will also seek to diffuse as far as possible the benefits of industrialization by establishing a number of industrial centres in various parts of the country. The private sector will be encouraged to invest in as many industries as possible, but certain key industries

where the extent of present demand may not justify more than one or two optimum plants, may be retained in the public sector to avoid monopolies or concentration of economic power. The main physical targets in the industries sector are: cotton textiles, 720 million lbs. of yarn which will allow cloth consumption to increase from about 14 yards per head in 1964-65 to 18 yards per head in 1969-70 and leave an exportable surplus of 300 million yards of cloth and 100 million lbs. of yarn per annum; white sugar, 640,000 tons; cigarettes, 30,000 million; tea 74 million lbs.; cement 6 million tons; steel 1.2 million tons. In addition, substantial capacity will be installed for the production of petro-chemicals, machine-tools and heavy engineering and electrical equipment.

FUELS AND MINERALS

20. The total allocation of Rs. 1,440 million will include Rs. 690 million in the public sector and the balance in the private sector. Due to rapid growth in industries and transport sectors, the demand for fuels and minerals will rise steeply. During the Third Plan, geological investigation for the discovery of various minerals and prospecting of oil and gas will be intensified. Gas distribution in West Pakistan will be expanded and a beginning made in the transmission and distribution of gas for industry and general development in East Pakistan. Coal production in West Pakistan is proposed to be doubled. Special attention will also be paid to the exploitation of recently discovered coal deposits in East Pakistan.

TRANSPORT AND COMMUNICATIONS

21. The transport and communications programme has been based on the requirements of the agricultural and industrial programmes, urbanisation and the need for balanced regional development. In East Pakistan, the main emphasis will be on inland water transport, roads and air services whereas in West Pakistan, the road programme will receive greater priority. The programme provides for increased number of road vehicles in the public and private sectors. Adequate provision has also been made for railways to improve their efficiency by measures like rehabilitation of rolling stock, strengthening of tracks, introduction of block signalling and centralized traffic control system. The plan also provides for improving the existing port facilities at Karachi and Chittagong and converting Chalna anchorage into a permanent major port, and considerable development of the national merchant fleet.

22. The Third Plan proposes a total programme of Rs. 1,200 million for the tele-communication services and it is expected that 150,000 additional telephones will be provided and telegraph and telephone services and inter-wing communica-

tions will be further improved. Postal services, particularly in the rural areas, will be expanded by opening 2,000 new post offices, thereby raising the total number to 13,800. This will on the average provide one post office for a population of 10,000. Television facilities will be expanded with greater emphasis on educational programmes.

PHYSICAL PLANNING AND HOUSING

23. The Plan provides the most essential needs of housing and services and to undertake a long range programme of physical planning in the public and private sectors which would guide the future of urban and rural development along sound lines mainly by adopting certain preventive measures. With this end in view the organization for Physical Planning and Housing will be strengthened, slum improvement and low income housing will be initiated by employing co-operative, self-help and mutual aid techniques. In addition water supply, sewerage and drainage facilities as well as the construction of capital at Islamabad and second Capital at Dacca has been accorded priority.

EDUCATION AND TRAINING

24. The main object of education and training sector programme will be to widen the base of primary education and greatly increase the facilities for technical and vocational education. Particular attention will be paid to reduce the currently high drop-out rate at the primary level. At the secondary stage, emphasis will be on the introduction of diversified courses and greater facilities for students in industrial arts, agricultural, commercial and home economics. In the field of higher education, existing colleges and universities will be consolidated for improving the academic standards and quality of instruction. The teacher-education programme will be expanded for providing increased facilities for training in scientific, vocational and technical subjects. The educational research programme of the Institutes of Education and Research and other related organisations will be strengthened. A large scholarship programme will be maintained to support meritorious students whose own resources are not adequate to cover their educational expenses. Adequate provision has also been made for adult education, promotion of arts, culture and sports.

HEALTH, MANPOWER AND SOCIAL WELFARE

25. In the health sector, main emphasis will continue to be on preventive measures; about 60 per cent of the allocation will be provided for preventive programmes such as eradication of malaria, tuberculosis control and health education. The curative services will include provision for 12,800 additional hospital beds and 660 rural health centres. Family Planning has been accorded high priority and an allocation of Rs. 284 million made for this programme.

26. In manpower and employment sector, provision has been made for increasing the number of trained workers, management and productivity development, employment service and workers education, industrial relations, social security of workers and industrial welfare. Similarly, in social welfare sectors, provision has been made not only for consolidating and expanding the existing preventive, curative and rehabilitative social services but also to initiate new programmes to meet untackled social problems.

WORKS PROGRAMME

27. The Third Plan provides a works programme of Rs. 2,500 million; Rs. 1,500 million in East Pakistan and Rs. 1,000 million in West Pakistan. In addition Provincial Governments will channel some of their resources to the Basic Democracies, replacing Provincial executing authorities by local. The experience of the works programme under the Second Plan has been very encouraging. The main objectives of the Works Programme are to utilize the surplus manpower, to create economic infra-structure, and to initiate a process of democratic planning from below. During the Second Plan the works programme was concentrated in rural areas. It is now proposed to supplement this with a strong urban works programme. If the objectives are achieved, Pakistan will have developed an instrument of paramount importance to promote her economic growth in keeping with her political objectives and without unduly disturbing the traditional way of life of the people.

CO-OPERATION

28. Co-operative form of organization would be used as an important pillar of policy during the Third Plan in line with the Central Government's Policy Declaration of 1962. In West Pakistan, a Co-operative Development Board was set up in May, 1962 as a semi-autonomous organization at the provincial level for planning and development of the movement on sound lines. It is proposed to set up a similar institution in East Pakistan to accelerate the expansion of the movement in a co-ordinated manner. The co-operative movement transcends sectoral pattern of Plan allocations and is thus dealt with in each relevant sector. To recapitulate here briefly the salient features of the programme for sponsoring Co-operation, eight schemes for co-operative development are included in the West Pakistan programme and nine schemes in the East Pakistan programme for Agriculture. The schemes in West Pakistan relate to reconstruction of rural credit and agricultural marketing, godown-*cum*-sales depots for service co-operatives, co-operative mechanised farming, co-operative tube-wells and lift irrigation, co-operative sheep-rearing and wool grading, co-operative milk producing and processing units and Education and Training in co-operative organization. In East Pakistan, besides the development of Co-operative Credit and Marketing structure, there are schemes for developing co-operatives of sugarcane growers, fishermen, jute growers and milk producers. While the main emphasis of the movement is currently in Agriculture, the Third Plan proposes further development of co-operative in housing, transport, cottage industries and crafts and consumer co-operatives.

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27. The Third Plan provides a works programme of Rs. 2,500 million; Rs. 1,500 million in East Pakistan and Rs. 1,000 million in West Pakistan. In addition Provincial Governments will channel some of their resources to the Basic Democracies, replacing Provincial executing authorities by local. The experience of the works programme under the Second Plan has been very encouraging. The main objectives of the Works Programme are to utilize the surplus manpower, to create economic infrastructure and to initiate a process of democratic planning from below. During the Second Plan the works programme was concentrated in rural areas. It is now proposed to supplement this with a strong urban works programme. If the objectives are achieved, Pakistan will have developed an instrument of paramount importance to promote her economic growth in keeping with her political objectives and without unduly disturbing the traditional way of life of the people.

CO-OPERATION

28. Co-operative form of organisation would be used as an important pillar of policy during the Third Plan in line with the Central Government's Policy Declaration of 1962. In West Pakistan a Co-operative Development Board was set up in May, 1962 as a semi-autonomous organisation at the provincial level for planning and development of the movement on sound lines. It is proposed to set up a similar institution in East Pakistan to accelerate the expansion of the movement in a co-ordinated manner. The co-operative movement transcends sectoral pattern of Plan allocations and is thus dealt with in each relevant sector. To recapitulate here briefly the salient features of the programme for sponsoring Co-operation, eight schemes for co-operative development are included in the West Pakistan programme and other schemes in the East Pakistan programme for Agriculture. The schemes in West Pakistan relate to reconstruction of rural credit and agricultural marketing, go-down-cum-sales depots for service co-operatives, co-operative mechanised farming, co-operative tube-wells and lift irrigation, co-operative sheep-rearing and wool grading, co-operative milk producing and processing units and Education and Training in co-operative organization. In East Pakistan, besides the development of Co-operative Credit and Marketing structure, there are schemes for developing co-operatives of sugarcane growers, fishermen, jute growers and milk producers. While the main emphasis of the movement is currently in Agriculture, the Third Plan proposes further development of co-operative in housing, transport, cottage industries and crafts and consumer co-operatives.

ANNEXURE TABLE

PHYSICAL TARGETS FOR THE THIRD FIVE-YEAR PLAN

	Unit	Benchmark production 1964-65	Target for 1969-70
AGRICULTURE :			
Rice	Thousand tons	11,400	14,445
Wheat	Thousand tons	4,157	5,464
Maize	Thousand tons	505	786
Other foodgrains	Thousand tons	738	770
Total foodgrains	Thousand tons	16,800	21,465
Gram	Thousand tons	650	738
Pulses	Thousand tons	360	495
Sugarcane	Thousand tons	20,750	28,300
Oil seeds	Thousand tons	1,177	1,827
Fruits and vegetables	Thousand tons	4,450	5,815
Jute	Thousand bales	6,200	8,000
Cotton	Thousand bales	2,217	3,520
Tea	Million pounds	64	74
Tobacco	Million pounds	233	273
INDUSTRY :			
Food manufacturing :			
White sugar	Thousand tons	312	640
Vegetable Ghee	Thousand tons	90	140
Cigarettes	Millions	18,500	30,000
Textiles :			
Cotton yarn	Million pounds	520	720
Jute manufactures :			
(*a*) Hessian & Sacking	Thousand tons	331	800
(*b*) Broad Loom Products	...	10	120
Paper and boards :			
Writing, printing and packaging paper.	Thousand tons	47	100
Board	Thousand tons	27	100
Newsprint and mechanical paper	Thousand tons	42	100
Non-metallic minerals :			
Cement	Thousand tons	2,000	6,000
Basic metals :			
Steel	Thousand ingot tons	Neg.	1,200

ANNEXURE TABLE—*contd.*

	Unit	Benchmark production 1964-65	Target for 1969-70
CHEMICAL INDUSTRIES:			
Nitrogenous fertilizers in terms of ammonium sulphate).	Thousand tons	550	2,500
Phosphatic Fertilizers (in terms of triple superphosphate).	Thousand tons	7	550
Soda ash	Thousand tons	28	172
Caustic soda	Thousand tons	15	90
Sulphuric acid	Thousand tons	16	600
Petro-chemicals	Thousand tons	—	329
ELECTRICAL MACHINERY:			
Wires and cables	Thousand tons	4	35
Heavy Electrical Equipment	Million rupees	NA	120
MACHINERY:			
Machine tools and Heavy Machinery (Complex)	Million rupees	NA	262
FUELS AND MINERALS:			
Natural gas	Thousand Mill. c.f.	80	200
Coal	Thousand tons	1,500	3,000
Sea salt	Thousand tons	290	450
Rock salt	Thousand tons	215	400
Chromite	Thousand tons	20	50
Silica sand	Thousand tons	25	50
Limestone	Thousand tons	2,800	7,000
Gypsum	Thousand tons	240	660
Crude Petroleum	Mill. Imp. Gall.	140	200
WATER:			
Irrigated area	Million acres	27.0	32.7
water availability	Million acre feet	68.0	91.0

ANNEXURE TABLE—*contd.*

	Unit	Benchmark production 1964-65	Target for 1969-70
POWER :			
Installed generation capacity	M.W.	1,435.30	2,888
Villages electrified	Number	3,087*	9,087†
TRANSPORT AND COMMUNICATIONS :			
Railways			
Locomotives (steam)	Number	1,045	880
Locomotives (diesel/electric)	Number	418	638
Passenger carriages	Number	3,461	3,872
Other coaching vehicles	Number	1,901	2,049
Wagons	Number	56,787	62,267
ROAD TRANSPORT :			
Buses	Number	17,200	23,950
Trucks	Number	34,900	48,500
High type roads	Miles	13,300	15,700
SHIPPING :			
Port traffic	Million tons	12.70	17.00
Ships	Number	52	98
COMMUNICATIONS :			
Telephones	Number	1,35,000	2,85,000
Post offices	Number	11,800	13,800
PHYSICAL PLANNING & HOUSING :			
Outline Plans (including Village Plans)	Number	—	45†
Establishment of housing and building research centres.	Number	1*	2†
House Building Corporation	Number	—	2†

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*Figure for Second Plan.

† Figure for Third Plan.

	Unit	Benchmark production 1964-65	Target for 1969-70
PHYSICAL PLANNING AND HOUSING (*contd.*)			
Savings and Loan Building Association	Number	—	2*
Establishment of Physical Planning Institute.	Number	—	2*
Development of residential plots	Number	1,50,000*	3,50,000†
Establishment of building trade schools	Number	3	10
Establishment of industrial workers housing corporation.	Number		2
Establishment of co-operative housing institutes at Lahore and Dacca.	Number		2
Preparation of urban and regional development plans.	Number	5	33
Houses built in public, semi-public and private sector.	Number	1,50,000*	2,92,500†
Water supply and sewerage arrangements for urban areas.	Number	30	60
Water supply and sanitation for rural areas:			
(a) Handpumps/tube-wells	Number	1,48,000	2,00,000
(b) Villages	Number	104	500
EDUCATION AND TRAINING :			
Primary schools	Thousand	62.50	108.50
Improvement of primary schools	Thousand	9.10	47.00
Children at primary stage	Million	7.30	13.10
Annual output of primary schools teachers.	Thousand	19.00	40.00
Children at lower secondary stage	Million	1.04	2.00
Engineering colleges/Universities	Number	7	10
Annual intake capacity of Engineering Colleges and Universities.	Thousand	1.63	3.30
Annual intake capacity of polytechnics.	Thousand	4.10	14.00
Annual intake capacity of vocational schools.	Thousand	8.30	50.00

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* Figure for the Second Plan.

† Figure for the Third Plan.

ANNEXURE TABLE—*concld.*

	Unit	Benchmark production 1964-65	Target for 1969-70
HEALTH:			
Doctors	Number	15,600	19,800
Nurses	Number	3,600	5,400
Nurses training centres	Number	18	24
Lady health visitors	Number	1,047	2,750
Training centres for lady health visitors.	Number	8	10
Hospital beds	Number	35,500	48,300
Rural health centres	Number	200	860
Medical colleges	Number	12	14
T.B. clinics	Number	96	166
SOCIAL WELFARE:			
Training, research and administration.	No. of projects	20	162
Urban community development	„	77	120
Medical social work	„	24	60
Family and child welfare	„	17	58
Youth work and recreational services	„	20	58
Rehabilitation of physically and socially handicapped.	„	16	73
Delinquent and probation	„	16	18
MANPOWER TRAINING AND LABOUR:			
Pilot projects for employment promotion, training of self employed and construction workers.	Number	—	8
Training Centres for Skilled Labour including *ex*-servicemen.	„	6	22
Seamen's training-ship/centre	„	—	2
Apprenticeship training advisory offices	„	7	18
Employment exchanges	„	20	37
Mines Rescue Stations	„	—	2
Films for workers' education	„	12	52
Social security institutions	„	—	2
Labour welfare centres	„	23	60

ANNEXURE TABLE—concld.

	Unit	Benchmark production 1964-65	Target for 1969-70
HEALTH:			
Doctors	Number	15,000	19,900
Nurses	Number	3,500	5,400
Nurses training centres	Number	18	24
Lady health visitors	Number	1,047	2,750
Training centres for lady health visitors.	Number	8	10
Hospital beds	Number	35,500	48,300
Rural health centres	Number	200	260
Medical colleges	Number	12	14
T.B. clinics	Number	96	165
SOCIAL WELFARE:			
Training, research and administration.	No. of projects	20	152
Urban community development	..	77	120
Medical social work	..	24	60
Family and child welfare	..	17	58
Youth work and recreational services	..	20	38
Rehabilitation of physically and socially handicapped.	..	14	73
Delinquent and probation	..	16	18
MANPOWER TRAINING AND LABOUR:			
Pilot projects for employment promotion, training of self employed and construction workers.	Number	—	8
Training Centres for Skilled Labour including ex-servicemen.	..	6	12
Seamen's training-ship/centre	..	1	2
Apprenticeship training advisory offices	..	7	18
Employment exchanges	..	20	32
Mines Rescue Stations	..		2
Films for workers' education	..	12	52
Social security institutions	..	—	2
Labour welfare centres	..	23	60

CHAPTER V

RESOURCES AND FINANCING

1. The size of the Third Plan has been determined in the light of a careful evaluation of the recent experience under the Second Plan, the growth possibilities that clearly exist in various sectors of the economy, and the expenditures necessary to exploit the growth potential of the economy to the maximum. A careful assessment of the resources that can be mobilized, both domestically and from abroad, shows that the growth and investment targets are well within reach. The proposed development programme of Rs. 52,000 million can be financed with only a modest increase in the present levels of external assistance and by maintaining the marginal rate of saving realized in the Second Plan period. The main problem is to mobilize an adequate proportion of these resources for the public sector programme, the size of which is fixed at Rs. 30,000 million. Current projections of resources in the public sector indicate that, in addition to revenue surplus, and a modest resort to deficit financing, efforts will be required to transfer responsibility for financing a part of the programmes of the public corporations from the Government Budgets to the capital market. In the private sector, estimates of resource availability and the experience of the Second Plan support an investment programme of Rs. 22,000 million. The rationale of overall resource projections, the availability of resources in the public sector and the investment possibilities in the private sector, together with changes in the institutional and policy framework necessary to mobilize these resources, are discussed in the following paragraphs.

SOURCE AND USES OF NATIONAL RESOURCES

2. The experience of the Second Plan has clearly demonstrated the capacity of the economy to attain high growth rates and to generate adequate resources for this purpose. The actual increase in the GNP over the Plan period is expected to be 29 per cent compared to the target of 24 per cent. Including imports, the total availability of resources is expected to increase to a level of Rs. 52,530 million in 1964-65. This increase in national resources has enabled capital formation to more than double in 1964-65 compared to the level of 1959-60.

TABLE 1

RESOURCES AND EXPENDITURES: 1959-60 — 1969-70

(Million Rs. ; current prices)

	1959-60	1964-65	1969-70	1969-70 (1964-65=100)
A. Resources:				
Gross National Product (Factor cost)	31,439	43,365	59,400	137
Indirect Taxes net of Subsidies ...	1,266	2,175	3,365	155
Gross National Product (Market Prices) ...	32,705	45,540	62,765	138
Imports of Goods and Services	3,535	6,990	8,985	129
Total National Resources	36,240	52,530	71,750	137
B. Expenditures:				
Private Consumption ...	28,007	36,024	46,410	129
Public Consumption ...	2,563	4,400	6,740	153
Total Consumption	30,570	40,424	53,150	131
Non-Investment Development Outlay in the Plan ...	160	655	1,100	168
Plan Investment ...	2,600	6,776	11,400	169
Other Investment Expenditure* ...	400	1,375	900	65
Changes in Stocks	430	250	400	160
Total Domestic Expenditure ...	34,160	49,480	66,950	135
Exports of Goods and Services	2,080	3,050	4,800	157
Total Expenditure on National Resources	36,240	52,530	71,750	137

*** Includes non-monetized investment and investment on Indus Basin Works.**

This is mainly due to the success achieved in holding down the increase in consumption to less than the increase in the GNP. While the rate of increase in public consumption has been substantially above that of private consumption, this is related mainly to rising debt service liability and recurring expenditure on completed development projects. It also includes the effect of an adjustment in the pay scales of the Government employees to the rise in the cost of living in the fifties. As public consumption constitutes a small proportion of total consumption, its increase did not significantly affect total consumption.

3. The GNP at factor cost is expected to increase by about 37 per cent over the Third Plan period. The increase in the GNP in terms of market prices will in fact be larger, *i.e.*, 38 per cent. The additional resources that will thus be available to the economy during the Third Plan period will be adequate to finance an increase of more than two-thirds in the level of investment proposed in the Third Plan period, allowing at the same time consumption to rise by 31 per cent (13 per cent on a per capita basis). This is expected to be accomplished with only a modest increase in the flow of foreign resources (including the financing of the Indus Basin Works). Table 1 presents estimated 1964-65 benchmarks on the basis of the latest analysis of GNP, exports, imports, consumption and investment and projections for 1969-70.

4. The Plan expenditure (including non-investment development outlay) is expected to rise from 16.3 per cent of GNP in 1964-65 to 20.0 per cent by the end of the Third Plan period. Correspondingly the ratio of consumption expenditure is expected to decline from 88.8 per cent to 84.7 per cent of GNP. The net inflow of external resources which increased sharply during the Second Plan period from 4.8 per cent to 8.1 per cent of GNP is expected to decline to 6.7 per cent by the end of the Third Plan period. Table 2 clearly brings out the rising share of investment and the declining share of consumption in total GNP.

TABLE 2

SOURCES AND USES OF NATIONAL RESOURCES IN THE THIRD PLAN

(Percentage of G.N.P.)

	1959-60	1964-65	1969-70
A. Sources :			
Gross National Product (at Market Prices)	100.0	100.0	100.0
External Resources	4.8	8.1	6.7
Total	104.8	108.1	106.7
B. Plan Investment :	7.9	14.9	18.2
Non-Investment Development Outlay	0.5	1.4	1.8
Other Investment Expenditure	1.2	3.0	1.4
Changes in Stocks and exchange reserves	1.7	0.0	0.6
Consumption Expenditures	93.5	88.8	84.7
Total ...	104.8	108.1	106.7

5. The critical assumption in the Third Plan is that the economy would continue to save and reinvest roughly 22 per cent of the additional income generated during the Plan period. Table 3 indicates the marginal rates of saving over the Second and Third Plan periods.

TABLE 3

MARGINAL RATES OF SAVING IN THE SECOND AND THIRD PLAN

(Million Rs.)

	(In current prices) Second Plan	(In 1964-65 prices) Third Plan
1. Increase in GNP (Market prices)	12,835	17,225
2. Increase in investment	4,970	4,300
3. Additional external resources (over the preceding Plan level).	2,110	495
4. Additional domestic savings (2 — 3)	2,860	3,805
Marginal rate of savings (ratio of 4 to 1)	22	22

6. It is obvious from the above Table that it will be possible to raise domestic savings necessary to finance the Third Plan with the same saving effort as was experienced over the Second Plan period. In fact this would impose less sacrifice on the nation as it implies that 28 per cent of the *additional per capita income* would be required to be saved in the Third Plan compared to 31 per cent in the Second Plan period.

7. A substantial part of the required saving effort is implicit in the financing of the public-sector programme, explained in a subsequent section. Public savings increased from Rs. 30 million in 1959-60 to Rs. 1382 million in 1964-65 and are expected to rise further to nearly Rs. 3000 million by 1969-70. Marginal rate of private savings out of incomes after taxes would in fact be somewhat lower in the Third Plan compared to the Second Plan. Thus public savings which increased from a negative figure in 1959-60 to 1.7 per cent of G.N.P. in 1964-65 would rise on the basis of present projections to 4.3 per cent in 1969-70. Thus private savings would rise from 8.6 per cent to 9.6 per cent over the Third Plan period which is less than the increase from 5.9 per cent to 8.6 per cent experienced during the Second Plan.

8. The saving effort to be made in the Third Plan is based on a clear recognition of the possibility that industrial profits may tend to decline with more domestic and international competition and the initiation of a structural change in favour of more complex and longer-gestation-period capital goods industries. This trend will be intensified by policies aimed at better distribution of income and wealth in the industrial sector. Liberalization of imports will, however, permit a fuller

and more efficient use of industrial capacity and at least moderate this trend. It is estimated that with the incentives provided by the present system of taxation as much as 60 to 75 per cent of industrial profits will contiaue to be re-invested. Furthermore, agricultural productivity is expected to increase substantially and the private sector is increasingly investing its income in the acquisition of tube-wells, tractors, fertilizers and other means of agricultural investment. Finally, the institutional framework for mobilizing domestic savings through the capital market has improved considerably and is expected to penetrate further in rural and semi-urban areas where the bulk of the new incomes will be generated during the Third Plan. In addition a comprehensive revision of the interest-rate structure is under way to provide greater incentives for a higher rate of savings. Thus, it will be possible to mobilize domestic resources to the extent of Rs. 35,500 million during the Third Plan period by maintaining the saving effort that the country undertook for the Second Plan.

9. The requirement for external resources for the Third Plan is estimated at Rs. 16,500 million. It is difficult to say what amount of foreign assistance the country can negotiate and disburse over the next five years but at least the current trends are reassuring. Leaving aside foreign private investment (about $150 million), technical assistance (about $100 million) and PL-480 assistance for the Plan ($210 million), the level of external resources envisaged in the Third Plan implies an annual commitment of about $600 million which compares with total pledges of $520 million in 1964-65. The acceleration assumed from the current rate is thus quite modest. The proportion of foreign financing in the Third Plan is expected to decline from 34 per cent in 1964-65 to 27 per cent in 1969-70. The projections of foreign resources are discussed in detail in the next Chapter and are integrated with the projections of the country's own balance of payments.

II. FINANCING OF THE GOVERNMENT SECTOR

10. The net programme of the public sector is expected to be Rs. 30,000 million. The financing of this programme is indicated in Table 4. It is expected that about 55 per cent of the public sector development programme would be financed from domestic resources compared to 47 per cent in the Second Plan. A substantial part of increased public savings is expected to come from larger budgetary surpluses at existing tax rates and from net capital receipts. However, it would be necessary to raise roughly 10 per cent of these resources by the imposition of new taxes leaving another 5 per cent to be mobilized through deficit financing necessary to permit adequate increase in money supply to meet the needs of a growing economy. The various elements of public sector financing are discussed in the subsequent paragraphs.

TABLE 4

RESOURCES FOR THE GOVERNMENT-FINANCED SECTOR

(Million Rs.)

	Second Plan		Third Plan Projection
	Target	Revised Estimates	
Domestic Resources :			
Surplus on revenue account	1,920	2,163	8,600
Net capital receipts	1,600	1,746	2,400
Additional taxation	1,750	1,800	3,000
Deficit financing	Nil	911	1,500
Possible additional resources	—	—	1,000
	5,270	6,620	16,500
External Resources :			
Project loans (including technical assistance)	5,250	2,932	7,000
Commodity loans	3,500	3,306	5,500
P.L.-480 counterpart funds	600	1,172	1,000
	9,350	7,410	13,500
Total resources	14,620	14,030	30,000
Domestic resources as a percentage of the total	36%	47%	55%
Foreign resources as a percentage of the total	64%	53%	45%

Surplus on Revenue Account :

11. During the Second Plan period, revenue surplus has become an increasingly important source of financing the development expenditure of the Government sector. The revenue surplus is expected to increase from Rs. 30 million in 1959-60 to Rs. 1,382 million by 1964-65 including the effect of additional tax effort. This major increase in revenue surplus was made possible by a 16 per cent annual increase in revenues while the increase in non-development

expenditure is being kept within 9 per cent per annum. In fact, excluding debt servicing and recurring expenditure of the development departments, the increase in administrative expenditure has been less than six per cent per annum in the Second Plan. This also includes the effect of revision of pay-scales of Government employees towards the end of the Plan period, which is not likely to recur in the near future. The projections for the Third Plan are summarized in Table 5 below:

TABLE 5

PROJECTIONS OF REVENUE SURPLUS FROM EXISTING TAXES

(Million Rs.)

Budgetary Head	1959-60	1964-65	1969-70	Total Third Plan Period
	At 59-60 Rates	At 64-65 Rates	At 64-65 Rates	At 64-65 Rates
A. Revenue receipts:				
Customs	560	1,080	1,350	6,420
Excise duties	370	849	1,400	5,785
Sales Tax	310	750	1,028	4,550
Income and Corporation Tax	370	633	1,015	4,238
Land revenue	220	307	307	1,510
Other taxes	170	362	480	2,128
Total Taxes	2,000	3,981	5,580	24,631
Non-tax revenues	640	1,113	1,670	6,724
Total Revenue Receipts	2,640	5,094	7,250	31,355
B. Non-Development Expenditure :				
Defence	960	1,297	1,434	6,890
General Administration	880	1,126	1,320	6,462
Development Departments	460	817	1,515	5,855
Debt Services	310	472	911	3,548
Total Non-Development Expenditure	2,610	3,712	5,180	22,755
Surplus on Revenue account	30	1,382	2,070	8,600

12. On a review of the revenue receipts from major tax heads for the last twelve years (1952-53—1963-64), it appears that these receipts, even after excluding the effect of additional taxation during the period, increased quite appreciably. The increase in excise duties and sales tax on domestic products was roughly in line with the growth in domestic manufacturing sector, while income and corporafion taxes moved by a higher proportion than non-agricultural income. Only in the case of import duties and sales tax on imports, did the collection of revenue improve less than in proportion to total imports, due mainly to the change in the composition of imports in favour of capital goods and raw materials on which rates of import and sales taxes are low. There is evidence in each case that this long-term measurement of the responsiveness of individual taxes to elements of growth in the economy understates the relationship observed in recent years. There is a large number of industrial units which enjoyed tax holiday and other liberal tax concessions in earlier years. Most of them will start paying taxes during the Third Plan period. Similarly in the case of import duties, there is not likely to be as steep a change in the composition of imports as was observed over the past decade. These considerations clearly point to the conclusion that the tax revenue will rise at a higher rate than is indicated by the analyses of relationship in the past. The elasticities have, however, not been corrected for recent upward trend. The elasticities of the four major taxes in relation to their determining variables are shown in the following Table.

TABLE 6

ELASTICITIES OF MAJOR TAX RECEIPTS

Tax Receipts	Determining Variables	Elasticity for Third Plan based on 1952-53—1963-64
Import Duties	Total Imports	0.7
Excise Duties	Value added in large-scale manufacturing sector.	1.0
Sales Tax:		
(a) Domestic Products	Value added in large-scale manufacturing sector.	1.0
(b) Imported Goods	Total Imports	0.4
Income and Corporation Tax	Non-agricultural Income	1.3

13. In projecting non-developmental expenditure, adequate provision has been made for strengthening the administrative machinery, particularly the development departments, for meeting defence expenditure, and the rising debt servicing

liability. The annual increase in defence and administrative expenditure is projected at two and three per cent, respectively, during the Third Plan period. The recurring expenditure of development departments will rise much faster, at about 13 per cent per annum, while debt servicing liability is projected to increase sharply at a rate of 16 per cent per annum. The latter two elements are directly related to the size of development effort, with a lag. On the completion of a project, its recurring expenditure is included in non-development outlay. Debt servicing liability is also related to the sizable increase in domestic and foreign debt during the Second Plan period.

The projected total revenue receipts on the basis of existing taxes and total non-developmental revenue expenditure are likely to result in a revenue surplus of Rs. 8,600 million over the Third Plan period.

Net Capital Receipts:

14. Net capital receipts during the Second Plan did not show as much buoyancy as revenue surplus, especially because of the substantially increased liability on account of repayment of foreign loans. Even so, these resources, along with estimated contribution from local bodies, are likely to yield Rs. 1,746 million against the Plan target of Rs. 1,600 million. The tentative projections of net capital receipts (excluding local bodies) add up to Rs. 2,400 million for the Third Plan period, as given in Table 7 below.

TABLE 7

PROJECTIONS OF NET CAPITAL RECEIPTS
(Million Rs.; 1964-65 prices)

	1964-65	1969-70	Total Third Plan
A. Capital Receipts:			
Small savings	130	170	770
Public borrowings (non-bank)	90	110	500
Depreciation and other reserve funds	200	270	1,245
Other receipts	170	260	1,040
Total receipts	590	810	3,555
B. Capital Liabilities:			
Repayment of foreign loans	83	280	905
Other liabilities	67	40	250
Total liabilities	150	320	1,155
Net Capital Receipts	440	490	2,400

Additional Taxation :

15. Additional taxation is the most important weapon that Government can use not only to raise additional resources but also to influence the direction of economic policies. This is all the more important in an economic framework where administrative controls are gradually being withdrawn and taxes and subsidies have necessarily to be used as regulatory measures. The National Economic Council has already appointed a high-level Commission on Taxation and Tariffs to review the possibilities of additional taxation in the Third Plan, to suggest ways and means for improving the efficiency of the tax collecting machinery, and to recommend the rationalization of the existing tariff structure. The first report of the Commission is expected to be available before the commencement of the Third Plan period.

TABLE 8

RATIO OF TAXES TO GNP

(Million Rs.; Current Prices)

	1959-60	1964-65	1969-70 (without additional taxation)	1969-70 (including proposed additional taxation)
Tax Revenue ...	2,000	3,981	5,580	6,480
Total Revenue ...	2,640	5,094	7,250	8,150
GNP (Market Prices) ...	32,705	45,540	62,765	62,765
Ratio of Tax Revenue to GNP ...	6%	9%	9%	10%
Ratio of Total Revenue to GNP...	8%	11%	12%	13%

16. The projections of tax revenues at current rates of taxation (as given in Table 5) show that the tax receipts will increase at about the same rate as the GNP so that unless additional taxation is imposed there is not likely to be any improvement in the present ratio of 9 per cent between tax receipts and GNP. As indicated in Table 8 above, ratio of taxes to GNP improved significantly from 6 per cent to 9 per cent over the Second Plan. Tentatively, the feasibility of raising about Rs. 3,000 million of additional resources by way of new taxes in the Third Plan is being examined. Even considering this additional taxation, the share of the GNP collected by the Government in taxes will be only 10 per cent by 1969-70. Ratio of total revenues (including non-tax revenues) to GNP has increased substantially from 8 per cent in 1959-60 to 11 per cent in 1964-65 and would improve further to 12 per cent in 1969-70 without additional tax effort and to 13 per cent with the tax effort.

17. There are several areas which need careful examination from the point of view of raising additional resources. The coverage of excise duties and sales tax can be extended and their rates rationalized further.This has to be a continuing exercise in a developing economy. Imports of consumer goods subject to high rates of tariff are being substituted by domestic industrial production. It is possible once the domestic industries have developed adequately, to compensate for the loss of import duty by subjecting them to excise duties and sales taxes at appropriate rates. In the case of import duties, the progressive liberalization of imports has necessitated much greater use of import tariff for regulating imports for balance of payments reasons. The process of replacing import licencing by regulatory import duties initiated towards the end of the Second Plan period would have to be carried further during the Third Plan period. Similarly the shift in the emphasis in industrial sector in favour of manufacturing capital goods domestically will require a much greater use of protective tariff. This change in tariff policy dictated both by industrial strategy and balance of payments considerations will yield substantial additional revenue over the Plan period. The need for continuing generous tax concessions to industry may also have to be reviewed. Similarly, ways and means must be devised to capture some of the increase in agricultural incomes in the form of taxes, particularly because agricultural incomes are expected to increase quite rapidly during the Third Plan period. There was some justification for not raising the burden of taxation in the agricultural sector during the fifties due to its virtual stagnation. With the high rates of growth achieved in the agricultural sector during the Second Plan period and projected for the Third Plan period, the picture has changed dramatically. Finally, considerable scope exists for improving tax collection machinery for reducing tax evasion, and expediting assessment and collection of taxes.

Deficit Financing :

18. Economic growth generates ever-increasing demand for money and credit. In the process of satisfying this need, public sector can acquire command over some resources, after meeting the genuine credit requirements of the private sector. In formulating the Second Five-Year Plan, the estimates of deficit financing and of expansion of money supply were set fairly conservatively. In fact, no provision was made for deficit financing, and the rate of expansion of money supply was projected exactly in proportion to the planned increase in national income. This caution was justified in view of the considerable monetary overhang from the First Plan period. The rate of monetary expansion was kept very low during the first two years of the Second Plan which allowed the excess liquidity in the economy to be absorbed through the growing demand for money in the economy. In the third and fourth years of the Second Plan period, however, money supply rose rapidly, by about Rs. 950 million per annum. According to current indications, this rate is expected to be exceeded in the final year of the Plan.

Over the Second Plan period, money supply is expected to increase by roughly Rs. 3,150 million, with the deficit financing* of the level of Rs. 1,800 million. Private bank credit has expanded at a remarkably accelerated pace partly financed by the accumulation of time deposits with the banks.

19. For the Third Plan period, a modest sum of Rs. 1,500 million is tentatively suggested to be mobilized for the public sector through deficit financing. This is a deliberately conservative estimate to provide fullest room for adjusting short-term monetary policy to the economic situation which will actually prevail from year to year. On an average annual basis this amounts to reducing the rate of deficit financing to roughly half that in the last three years of the Plan.

20. The deficit financing suggested in the Plan is fully consistent with the estimated increase in the demand for money and the expansion of credit for the private sector. It has been estimated that if allowance is made for growth of the monetized sector as compared to GNP the ratio of money supply to resource flows in the monetized sector increased from 24.6 per cent to 26.2 per cent over the Second Plan period.

TABLE 9

RATIO OF MONEY SUPPLY TO RESOURCE FLOWS IN THE MONETIZED SECTOR

(Million Rupees)

	1959-60	1964-65	1969-70
Gross National Product (1964-65 market prices)	33,640	45,540	62,765
Non-Monetized Sector†	9,844	11,132	14,079
GNP in the Monetized Sector	23,796	34,408	48,686
Money Supply (end-year)	5,853	9,000	13,000/ 14,000
Ratio of Money Supply to Resource Flows	24.6%	26.2%	26.7/ 30.0

† 50 per cent of value added in agriculture in 1959-60 and 10 per cent of services. The ratio of non-monetized sector in agriculture is assumed to have come down to 47 per cent in 1964-65 and 45 per cent in 1969-70.

Even to keep this ratio virtually constant over the Third Plan period, money supply may have to rise by Rs. 4,000 million. An increase of Rs. 5,000 million would imply only an increase in the ratio of money supply to resource flows in the monetized sector in line with the Second Plan experience.

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*Deficit financing is defined here to include all financial transactions in the public sector which have an expansionary influence on money supply. It does not, therefore, compare with the budgetary deficit figure used earlier.

21. With an increase in money supply of the order of Rs. 4,000 million to Rs. 5,000 million—indicating a reduction in the rate of monetary expansion compared to the latter part of the Second Plan—deficit financing of Rs. 1,500 million would leave ample scope for necessary expansion of bank credit in the private sector. In fact, deficit financing of this order would be necessary to generate sufficient primary reserves in the banking system on which credit expansion for the private sector may be based.

22. It may be pointed out that banks are required by law to maintain a liquidity ratio of 20 per cent (consisting of cash, balances with the State Bank and unencumbered Government securities). The banking system has generally maintained a higher ratio to allow for seasonal fluctuations. Allowing for the required increase in balances with the State Bank, banks may be expected to invest 15 to 20 per cent of the net increase in their deposits in Government securities. On this basis, roughly Rs. 750 to 1,000 million of resources may be obtained through sale of marketable loans to banks, leaving the balance to be obtained by borrowing from the State Bank. In case the monetary situation so warrants, a shift of bank credit from the private to the public sector can be effected by raising the liquidity ratio of the banks, reducing reliance on the State Bank.

23. It is the nature of any projection of the extent of safe limits of deficit financing that the figure adopted can only be a very tentative estimate, depending as it does on many uncertain elements of future economic developments. The Third Plan estimate of deficit financing is neither a target to be achieved nor a rigid limit that cannot be over-stepped. It is a cautious estimate of the potential on an assessment of the existing and prospective situation. A close watch must be kept on the economic situation as it actually unfolds itself through the Third Plan period, and judgements must be continuously formed on what monetary and fiscal policies will be appropriate for dealing with imbalances in the economic and monetary situation. The safe and appropriate role of deficit financing in annual budgets must be determined at the time of budget making; short-term monetary policy must continue to play an important role in keeping the economy on an even keel. A plan can merely provide the broad framework within which considerable scope for policy manipulation remains.

24. Rapid economic development during the Second Plan has been accompanied by remarkable price stability. The wholesale price index rose by only 5 per cent during the first four years, while cost of living indices showed increases ranging between 2 to 3 per cent per annum. Price stability would continue to be a basic policy objective during the Third Plan. Some rise in prices is, however, inevitable at the present stage of economic development for three reasons. First, import substitution under shelter of tariff, a basic element in the industrialization

programme must raise the prices of sheltered products. Second, some rise in agricultural prices is necessary to encourage the shift from subsistance to cash crop agriculture. Third, the need to place heavy reliance on indirect taxes to discourage consumption has some implications for domestic prices. In the course of time, increasing efficiency of production will reduce costs and prices and will offset these factors. However, for the Third Plan, some modest increase of prices is inevitable. The effort would be to keep this increase within tolerable limits.

Possible Additional Resources:

25. The above projections of revenue surplus, net capital receipts and deficit financing have been made on a conservative basis. It is possible that resource mobilization through these means may be larger, especially in terms of current prices. Additional revenue may accrue to the public sector from some of the policy measures currently under the consideration of the government, such as the substitution of foreign exchange loans to the private sector through PICIC and IDBP by a system which transfers the rupee counterpart of these loans to the public sector, revision in the pricing policy of the public corporations and greater participation by the private sector in joint ventures with the public sector. It is important to note, however, that a ceiling of Rs. 30,000 million has been set on the implementation of public sector programmes. If actual resources fall short of this ceiling or if private sector can take on some of the activities presently reserved for the public sector, the net implementation in the public sector may be correspondingly lower than currently estimated.

III. FINANCING OF THE PRIVATE SECTOR

26. The performance of the private sector in respect of fixed capital formation has exceeded the targets in the Second Plan. The Plan had estimated private investment (including non-investment development outlay in the private sector such as expenditure on fertilizers) at Rs. 8,380 million. According to the latest estimates, investment in the private sector is expected to be as a high as Rs. 11,500 million. On an annual basis, the level of private investment roughly quadrupled over the Plan period, rising from Rs. 805 million in 1959-60 to Rs. 3,180 million (estimated) in 1964-65.

27. This acceleration in private investment activity was intimately linked with the adoption of liberal economic policies recommended by the Plan and a gradual relaxation and withdrawal of direct controls on prices, distribution, imports and investment decisions. Reliance on the Investment Schedule as a tool for directing investment within the frame-work of the Plan, coupled with improved availability of key inputs like cement and steel and freer imports of raw materials evoked a highly favourable response from the private sector. Moreover, in

recent years a climate has been created in which businessmen can plan with confidence in the hope that the economy would continue to grow which is the only guarantee of long-term profitability of any venture. Finally, institutional facilities for both credit and equity finance have reached a stage of maturity where they contribute substantially to the financing of private investment.

TABLE 10

FINANCING OF THE PRIVATE SECTOR DURING THE SECOND AND THIRD PLAN

(Million Rs.)

	Original Estimates (1960-61 Prices)	Revised Estimates (Current Prices)	Third Plan (1964-65 Prices)
Loans and credits in foreign exchange	1,600	1,440	2,300
Private foreign investment	600	450	700
Private domestic savings	6,180	9,610	19,000
Total	8,380	11,500	22,000

28. Table 10 shows clearly that the larger investment programme resulted exclusively from higher domestic savings, which more than compensated for the shortfall in the availability of external resources. Present estimates of private savings are about 50 per cent above the original projections of the Second Plan. Savings mobilized by the private sector in the Second Plan can be compared with the growth of production in those sectors where savings are generated. On this basis, it is possible to project the amount of savings that would probably be forthcoming in the private sector at about Rs. 19,000 million during the Third Plan.

29. Even though foreign loans and credits to the private sector fell short of the Second Plan expectations, their level has been increasing each year. In fact, the shortfall resulted mainly from the low level at the beginning of the Second Plan, being only Rs. 40 million, but in subsequent years a steep increase is noticeable, leading to an estimated inflow of Rs. 450 million in 1964-65. For the Third Plan, an estimate of foreign loans and credits to the private sector of Rs. 2,300 million can thus be considered fairly conservative. In addition, foreign private investment is estimated for the Third Plan at Rs. 700 million, bringing the total of external resources to the private sector to Rs. 3,000 million. This expectation should be fulfilled with only a modest acceleration in the net flow of foreign resources to the private sector over the level of 1964-65. In addition it would be possible to meet additional import requirements of the private sector out of the country's own resources. Moreover, substantial expansion of basic industries projected for the Third Plan would reduce the dependence of private investment on imported inputs to some extent.

30. Primarily responsibility for financing the expansion of the private sector rests upon the domestic institutional framework. Considerable effort has already gone into building up an adequate framework of credit and financing institutions in the country. The reform of these institutions carried out at the beginning of the Second Plan period enabled them to play their part effectively in financing the acceleration of private investment during the Second Plan period. It is expected that with the experience gained in the Second Plan period, the private financing institutions notably capital market will be in a position to play a more important role in the Third Plan period. Acceleration of private investment activity in the Third Plan is estimated at roughly half the rate achieved in the Second Plan period, as the base is now higher and some of the pent-up investment demand in the industrial sector from the First Plan period has already been reflected in the acceleration during the Second Plan period.

The following Table indicates estimated contribution of various sources of financing for private investment.

TABLE 11

PRIVATE SECTOR FINANCING

(Million Rs.)

	1960-61	1964-65	1969-70
Private Investment	1457	3180	5200
Public Subscription to New Flotation	65	300	500
Foreign Private Investment	90	100	180
Foreign Loans in the Private Sector	75	500	750
Bank Credit *	461	1000	1500
Ploughing Back of Profits by Large-Scale Industry	450	750	1550
Household Savings Used for Self-financing	316	530	820

* Includes credit advanced by specialized Corporations except PICIC. The latter has largely provided foreign loans.

31. The private investment in the industrial sector, including fuels and minerals, is placed at Rs. 9,050 million in the Third Plan, roughly 40 per cent of the total private investment. Of this, about one-third may be expected to be mobilized through the market for new capital issues if the rate observed at the end of the Second Plan is maintained. A similar amount may be forthcoming through the re-investment of earnings in the industrial sector and the ploughing back of profits of existing industries. The balance may be financed by loans from the Industrial Development Bank and PICIC. A major portion of the foreign loans for the private sector will be used for industrial ventures. PICIC had sanctioned loans amounting to Rs. 1,435 million over the four-year period ending June 1964. IDBP provided Rs. 680 million over the same period. In addition adequate provision has been made for meeting working capital requirements of the industrial sector in projecting bank credit expansion for the Third Plan.

32. In the agricultural sector which would account for nearly one-fifth of the total private investment in the Third Plan, self-financing has played a major role so far. The Agricultural Development Bank had made loans amounting to Rs. 267 million by the end of December 1964. In addition, the State Bank channelled Rs. 150 million through the Co-operative Credit System for meeting short-term requirements of the agricultural sector. It is of vital importance for the success of the Third Plan, which relies heavily on growth in the agricultural sector, that a much larger flow of credit is directed to this sector. The Bank will be required to undertake an ambitious programme of branch expansion to be as near as possible to the rural areas, of particular significance will be the proposed line of credit being arranged through the World Bank. In addition to the resources placed at its disposal by the Government and supplementary finance obtained from the State Bank of Pakistan, the bank should make a concerted effort to mobilize resources on its own by accepting private deposits. As a substantial part of the new incomes is to be generated in the agricultural sector, the Agricultural Development Bank would be in the most strategic position for mobilizing resources. An attempt must also be made to revitalize the co-operative credit system and to co-ordinate these institutions and the Agricultural Development Bank into a well-integrated credit system for the agricultural sector. There is growing evidence that rural savings are increasing steadily. A large part of these savings has been diverted through the banking system to urban money market centres. The proposed expansion of agricultural credit need not prevent a continuation of the mobilization of rural and semi-urban savings through the banking system.

33. In the case of housing, the finance has so far been provided mainly by individuals out of their own savings. The house-building loans provided by the House Building Finance Corporation have supplemented these resources only marginally. Total loans disbursed by the House Building Finance Corporation during the first four years of the Second Plan amounted to Rs. 180 million. The banking system has been singularly reluctant to provide credit for house-building or against immovable property generally. This lack of credit facility has been responsible for a substantial shortfall in the private housing programme in the Second Plan. If the increase in the house-building activity in the private sector suggested in the Third Plan (2,12,500 new dwelling units compared to 50,000 in the Second Plan) is to be realized, credit facilities would have to be improved substantially. In addition to enlarging the scope of operation of the House Building Finance Corporation, it would be necessary to sponsor and encourage the setting up of specialized credit institutions in this area such as Saving and Loan Associations and Mortgage Banks.

CHAPTER VI

BALANCE OF PAYMENTS AND EXTERNAL RESOURCES

The balance of payments projections and the numerous explicit and implicit policies on which they depend, constitute one of the most crucial elements of the Third Plan. These projections and policies will require careful and continuous review during the Plan period in the light of future trends and changes.

2. One of the outstanding features of the Second Plan has been its success in stabilizing and improving the balance of payments situation in the country. Export earnings have been higher than the Plan estimates, import requirements have been less than originally projected and the country has been able to exceed the investment targets of the Plan without requiring as much external assistance as was anticipated earlier. This improvement must be consolidated and accelerated during the Third Plan.

3. The main objective of the balance of payments strategy in the Third Plan is to move towards greater economic viability and finance an increasing proportion of development imports from the country's own resources. The first important element in this strategy is to increase exports at a rate considerably faster than the increase in the GNP. The second important element in the strategy is to develop an import pattern which will encourage savings and investment and extend the import substitution effort over a much wider front. Both these elements will help to reduce still further the need for foreign assistance and take the country a step nearer to its long term objective of self-sustaining growth. The inflow of external resources as a proportion of development expenditure is expected to decrease from 34 per cent in 1964-65 to 27 per cent in 1969-70.

4. The export targetsfor the Third Plan aim at an increase of 57 per cent during the 5 year period compared to an increase of 37 per cent expected in the GNP, implying a ratio of increase of GNP to increase in exports of 1.4. During the Second Plan this ratio was already 1.3 since exports increased by 40 per cent, while the increase in the GNP is estimated at 29 per cent. The projected increase in exports is based on two major policies. Firstly, that the pattern of growth will be reoriented still further in favour of the export sector and the development programmes in the agricultural and industrial sectors will concentrate on exportable commodities and products. Secondly, even within the existing production pattern, a larger proportion of the increased agricultural and industrial production will be diverted to the export market through appropriate fiscal policies and other incentives to restrain domestic consumption and encourage exports. Agricultural and primary exports during the Third Plan period are estimated to increase from Rs. 1,630

million in 1964-65 to Rs 2,050 million in 1969-70, and manufactured exports are expected to increase from Rs. 870 million to Rs. 2,000 million. While the marginal increase in agricultural exports as a proportion of the total increase in agricultural production is very small, that in manufactured exports is about 10 per cent of the additional industrial output during the Third Plan period. During the Second Plan, only 3 per cent of the increase in industrial output was diverted to the export market because the industrial programme was primarily geared to import substitution. The proposed target for the export of manufactured goods constitutes one of the most important elements of the balance of payments strategy.

5. The import requirements for the Third Plan were calculated on the basis of the growth and production targets and the imported inputs required to produce them after taking account of planned import substitution. This import substitution contemplates a shift from imports of final goods to raw materials and intermediate products both for consumer and investment goods. The import of capital goods are expected to increase from Rs. 2,450 million in 1964-65 to Rs. 3,050 million in 1969-70, an annual increase of 4.5 per cent and that of raw materials from Rs. 1,455 million to Rs. 2,490 million, which implies an increase of 11 per cent per annum. The annual increase in consumer goods imports will be only 3.3 per cent, from Rs. 670 million in 1964-65 to Rs. 760 million in 1969-70. These estimates imply that the ratio of the increase of capital goods imports to the increase in total development expenditure will decline from 0.9 to 0.4 during the 5-year period, and that between raw material imports and the increase in non-agricultural GNP from 2.2 to 1.8. The implicit strategy of import substitution is to meet the large bulk of the increased demand for consumer goods from domestic production and to lay the basis for an expanding capital goods industry, while increasing the proportionate imports of raw materials.

6. The estimates of import substitution underlying these import projections have been carefully related to the agricultural and industrial programmes and targets. In the field of raw materials, these estimates cover such identifiable items as iron and steel, cement, coal, chemicals, finished petroleum products, cotton seed oil, tobacco, and rayon, but in respect of capital goods, the field is more diverse and varied and includes items like tractors, pumps, trucks, machine-tools, locomotives, diesel engines and electrical equipment.

7. As indicated in the preceding chapter, the resources that the country needs from abroad in order to achieve a meaningful rate of growth are estimated at Rs. 16,500 million. The implication of this for the balance of payments policy is that the gap between country's exports and imports should also be no more than

Rs. 16,500 million. Thus, the export and import substitution policies in the Third Plan have to be so devised as to reduce the foreign exchange gap to the level of the resources gap. This, in fact, has been the framework within which export targets and import substitution possibilities for the Third Plan have been developed. Total imports and payments during the Third Plan period are estimated at Rs. 35,500 million and total exports at Rs. 20,000 million, leaving a foreign exchange gap of Rs. 15,500 million. In addition Rs. 1,000 million will be realized in counterpart funds from PL-480 imports.

I. EXPORT PROJECTIONS

8. The Second Plan had estimated that foreign exchange earnings would increase from Rs. 2,127 million in 1959-60 to Rs. 2,450 million in 1964-65 and total earnings during the period would be Rs. 11,250 million. It now appears that the country's own earnings have been increasing at about 7 per cent per annum against only 3 per cent forecast in the Plan and total earnings during the five-year period would be about Rs. 13,250 million, *i.e.*, Rs. 2,000 million more than anticipated earlier. The sharp increase in the country's exports during the Second Plan was brought about by a number of factors, the most important of which was the increased agricultural and industrial production and a pattern of growth which favoured exports. The production targets, as originally estimated by the Second Plan, were exceeded in actual practice, especially in sectors which had a considerable export potential. Fiscal policies also helped in curbing consumption and diverting a larger proportion of increased production into the export market.

9. A second important factor was the adoption of appropriate policies for strengthening of export incentives, particularly the extension of the export bonus scheme. This scheme gives the exporters an entitlement of 20 to 30 per cent of the foreign exchange they earn which can be used to import specified items or sold in the free market at a current premium of about 150 per cent. Exports covered by the Bonus Scheme has increased from Rs. 540 million in 1959-60 to Rs. 1000 million in 1964-65 and of miscellaneous manufactures from Rs. 142 million in 1960-61 to Rs. 410 million in 1964-65. Similarly the extension of the Bonus Scheme to remittances from abroad and to earnings of shipping companies led to a sizable increase in invisible earnings which went up from Rs. 409 million in 1960-61 to Rs. 550 million in 1964-65.

10. A third factor which facilitated the expansion of exports was the diversification of export markets. There was a noticeable increase in Pakistan's exports to countries in the Afro-Asian region and the Socialist *bloc*. Without this deliberate policy to diversify exports it would have been difficult to find adequate outlets for the export of jute and cotton and to maintain their prices.

11. A fourth important factor was the strengthening of the institutional framework for export promotion. An Export Promotion Bureau was created with regional offices at Dacca and Lahore. A number of special committees and organizations were created to promote and regulate the export trade.

A large number of trade delegations were also sent abroad to explore new markets for Pakistan's products.

12. It is clear that while the pattern of growth made it possible to obtain larger exportable surpluses, it was mainly due to the adoption of appropriate policies and incentives and the evolution of a more effective institutional framework, that these surpluses were diverted to the export market.

13. Export targets for the Third Plan have to be formulated against the background of the export performance during the Second Plan and the production prospects during the next five years. The long-term export objectives of the 20-year Perspective Plan have also to be kept in view in determining the minimum necessary rate of acceleration that must be achieved during the Third Plan period.

14. The Third Plan visualizes considerable expansion in agricultural and industrial production. These higher growth and production targets are expected to yield larger export surpluses since the composition of the production programme will be geared to export objectives and appropriate policies and incentives will be adopted to restrain consumption and channel these surpluses into the export market.

15. An important element of the Third Plan strategy for industrialization is the policy of setting up additional capacity primarily for export. The country's industrial effort so far has been geared primarily to import substitution, and barring jute manufactures and to some extent fish, very few industries have been developed for the export market. Despite a marked expansion in industrial production, the ratio of manufactured exports to total industrial output declined from 4 per cent in 1959-60 to 3 per cent in 1964-65. One of the objectives of the Third Plan should be to bring about a major structural change in Pakistan's exports by increasing this ratio at least to 5 per cent and the export of manufactured products in absolute terms by at least 130 per cent.

16. The proposed policy of establishing specific export industries requires a careful appraisal of the country's natural and acquired advantages. Pakistan's present and future manufactured exports can be divided into four broad categories:

(a) Manufactured products based on agricultural raw materials, like jute and cotton, which constitute 60 per cent of Pakistan's manufactured exports at present.

(b) Industrial products based on raw materials which are available in the country in adequate quantities, such as cement, fertilizer, petro-chemical products and paper. The export of these products at present accounts for only 5 per cent of total manufactured exports.

(c) Industrial products in which comparative advantage in the international market can be acquired from special skills developed in the production of these products. These will include items like sports goods, cutlery, musical instruments, and carpets, and constitute at present about 6 per cent of manufactured exports.

(d) Industries based primarily on imported raw materials, such as electrical goods, pumps, trucks, and machinery and equipment, where an expanding domestic market can facilitate efficient production and a competitive position in the world market. At present the export of these items is almost negligible.

17. The immediate and ultimate potential of each of these categories has been carefully analyzed in developing export industries. During the Third Plan period there will be ample scope for consolidating and expanding the export potential under category (a) and for making a determined beginning in respect of industries in category (b) provided export capacity is clearly visualized and built into the industrial programme and the efficiency of these industries is improved to reduce costs. The expansion of exports under category (c) will be gradual but can become quite significant in the closing years of the Third Plan. Industries under category (d) will of necessity take longer to enter the export market. Production in the Third Plan period will be primarily for the domestic market. Programmes under each of these categories will require careful advance planning and different kinds of promotional measures.

18. The increase in the export of manufactured goods will be achieved without minimizing the importance of agricultural exports. As already mentioned, the outlook for agricultural production is brighter, and by following an appropriate cropping pattern, it should be possible to increase the production of crops with a larger export potential, particularly rice, cotton, and fruits and vegetables whose demand in the international market will continue to be favourable.

19. Invisible earnings which include earnings for services rendered and remittances by Pakistanis abroad, have increased significantly during the Second Plan period. The scope for expanding these earnings in future is even better if efforts to enlarge and improve the scope and quality of the country's air, shipping and other services are intensified and adequate incentives are maintained to attract larger remittances from Pakistanis living abroad.

20. Export targets for the Third Plan, based on the prospects and polici discussed in the preceding paragraphs, are summarized in Table 1:

TABLE 1

EXPORT TARGETS FOR THE THIRD FIVE-YEAR PLAN

(Million Rs.)

	1960-61	1961-62	1962-63	1963-64	1964-65 (Estimates)	1969-7 (Projection)
A. Primary Commodities:						
1. Raw jute ...	872	870	848	776	820	750
2. Raw cotton ...	195	163	401	443	320	550
3. Hides and skins ...	74	90	81	76	70	80
4. Raw wool ...	83	87	91	97	90	90
5. Rice ...	54	112	125	71	145	250
6. Fish (fresh and dried)	28	36	53	41	45	100
7. Other Primary Commodities	90	100	120	120	140	230
	1,396	1,458	1,719	1,624	1,630	2,050
B. Manufactured Products:						
8. Jute manufactures	230	339	317	341	350	800
9. Cotton manufactures	122	50	92	115	180	350
10. Fish (processed)	28	36	53	41	50	150
11. Paper and newsprint	6	10	6	6	20	50
12. Other manufactures	52	72	94	170	270	650
	528	507	562	673	870	2,000
C. Invisible Earnings: ...	409	464	464	574	550	750
Total Earnings (A + B + C)	2,333	2,333	2,781	2,811	3,050	4,800
Adjustable for freight element	—47	—45	—33	—26		
Total Earnings excluding freight	2,286	2,384	2,748	2,785	3,050	4,800

21. These export targets, if achieved, will raise the level of exports from Rs. 3,050 million in 1964-65 to Rs. 4,800 million in 1969-70 which will mean a rate of increase of about 9.5 per cent per annum as against the increase of 7 per cent achieved in the Second Plan. This rate is fully consistent with the targets of the Perspective Plan to raise exports to Rs. 14,000 million by 1985 and to eliminate the country's dependence on external assistance.

22. These targets imply a significant structural change in the composition of the country's exports in favour of manufactured goods, without foregoing the importance of the agricultural exports in which Pakistan can enlarge its share of the world market. Manufactured exports, which are expected to account for nearly 27 per cent of the total exports in 1964-65, are expected to increase to about 42 per cent of the total in 1969-70.

23. One of the most uncertain elements in the process of estimation is the forecast of the price situation which itself is determined by the inter-action of a number of complex factors. It is assumed that in most cases at least the current level of prices will be maintained during the next five years. In some cases, a slight fall in prices has been assumed in order to accommodate a larger exportable surplus.

24. Policies to encourage exports will be intensified and in particular export incentives will be maintained and strengthened during the Third Plan. These include the Export Bonus Scheme, the Export Credit Guarantee Scheme, the Pay-As-You-Earn Scheme and fiscal concessions to exporters. Present efforts to encourage and diversify trade through UNCTAD, GATT, RCD, and bilateral and multilateral arrangements will be intensified. Industrial units with export potential envisaged in the Third Plan will be sanctioned on a priority basis, adequate provision of raw materials will be made for such industries and various institutional arrangements necessary to encourage the export of their products will be implemented efficiently.

25. Details of assumptions regarding production, consumption, exportable surplus and other elements, on which these export projections are based are spelled out in a detailed study on export projections for the Third Plan.

II. IMPORT REQUIREMENTS

26. A sharp increase in import requirements, particularly for capital goods and raw materials is an inevitable characteristic of the development process, but the manner in which these imports are regulated and the speed with which the import substitution effort is extended to a wider range of products has a vital bearing on the rate of saving and investment and the future growth potential of the economy.

27. The import requirements for the Third Plan have to be estimated in relation to production targets for the Plan. This has been done on the basis of input output analysis which relates imports to production in various sectors of the economy for the year 1963-64. The estimates thus derived have been adjusted on the basis of targets of import substitution included in the industrial programme and by assuming that the demand for certain consumer goods would be restrained through appropriate fiscal and import policies.

28. Import requirements for the Third Five-Year Plan are categorized between development imports and non-development imports. The former includes all capital goods imports and raw materials for capital goods industries whereas non-development imports include imports of consumer goods, raw material for consumer goods industries and payments for services. This distinction between development and non-development imports is different from that followed in the Second Plan which treated only capital goods as development imports. The significance of this change in classification is that it permits a more realistic assessment of the extent to which imports contribute to the development effort or to meeting rising consumption needs.

29. For the Third Plan as a whole, total development imports are estimated at Rs. 22,500 million which is about 63 per cent of total imports of 35,500 over the five-year period. The proportion of non-development imports would have been lower but for the unavoidable increase in foreign debt servicing. The ratio of development imports to development expenditure on the basis of the revised classification for the Third Five-Year Plan compared to that in the Second Five-Year Plan is shown in the following Table.

TABLE 2

FOREIGN EXCHANGE COMPONENT OF DEVELOPMENT EXPENDITURE

	Second Plan		Third Plan	
	Million Rs.	Percentage	Million Rs.	Percentag
1. Development Expenditure (including Works Programme) ...	26,330	100	52,000	100
2. Total development imports: ... of which	13,286	50	22,500	43
2.1. capital goods	(9,644)	(36)	(15,300)	(29)
2.2. raw materials for capital goods industries and technical assistance ...	(3,642)	(14)	(7,200)	(14)

30. The maintenance of a high proportion of development goods in total imports in the Third Plan is in accordance with the Plan's strategy for further stimulation of savings and investments. Thus, of the planned increase in the Gross National Product from 1964-65 to 1969-70, about 76 per cent is assumed to be spent on consumption needs. Of the planned increase in imports, however, only 38 per cent, or half as much, is assumed to be for consumption. The policy of a rapid increase in exports and imports over the Third Plan period, coupled with policies that maintain a composition of imports in favour of development goods will be an important element in the strategy of stimulating savings and containing consumption.

(i) *Development Imports :*

31. Imports of capital goods are expected to increase at 4.5 per cent per annum from a level of Rs. 2,450 million in 1964-65 to Rs. 3,050 million in 1969-70 but development expenditures are expected to increase more rapidly. As a result, the ratio of capital goods imports to total development expenditure will decrease from an estimated 36 per cent in the Second Plan period to 29 per cent during the Third Plan period. This decrease in the requirements of capital goods imports is partly due to the changing composition of the development programme and partly the expansion of domestic capacity to produce a number of important capital goods.

32. The full impact of these changes on the import programme can be accurately judged only when the sectoral development programme has been further elaborated and when the potential for domestic production of capital goods has been assessed in greater detail. The proposed reduction in the need for imported capital goods is, however, an important step in the long-term strategy of reducing the country's dependence on foreign assistance.

33. Imports of raw materials for capital goods industries are expected to be about 93 per cent higher in the Third Plan compared to the Second Plan, but will constitute the same proportion of total imports. While domestic production of capital goods must be expanded as rapidly as possible the industrial programme must be so designed as to minimize the corresponding increase in the import of raw materials. For this purpose the import substitution effort will be intensified to cover raw materials such as iron and steel, chemicals and other manufactured products.

(ii) *Non-Development Imports :*

34. Total non-development imports and payments are expected to increase from an expected level of Rs. 2,034 million in 1964-65 to Rs. 3,060 million in 1969-70. These include consumer goods imports, raw materials for consumer goods and invisible payments.

35. Consumer goods imports, excluding PL-480 commodities, increased from a level of Rs. 570 million in 1960-61 to Rs. 645 million in 1964-65, a rise of only 13 per cent during the Plan period. Even this modest increase was attributable mainly to the working of the Export Bonus Scheme and a relaxation of import controls on essential goods such as medicines and books. About 25 per cent of the total consumer goods imports were financed by bonus vouchers which included such items as sugar and automobiles. The estimates for the Third Plan provide for only a gradual increase in consumer goods imports, from Rs. 645 million in 1964-65 to Rs. 760 million in 1969-70. The suggested increase will cover the inevitable increase in consumer goods imports against bonus vouchers and the demand for such essential goods as medicines and books. The bulk of the increased demand for consumer goods is expected to be met by larger domestic production.

36. Imports of raw materials for consumer goods, which increased from Rs. 317 million in 1960-61 to an estimated Rs. 585 million in 1964-65, are expected to rise to Rs. 920 million by 1969-70. The rate of increase during the Third Plan period is expected to be slower than that in the Second Plan for two reasons. Firstly, a larger proportion of total industrial investment in the Third Plan will be devoted to capital goods industry rather than consumer goods industry and secondly the level of raw material imports in 1964-65 will be fairly high following the gradual liberalization of the import policy during the Second Plan period. The rate of increase during the Third Plan will not be as rapid as in the preceding three years.

37. Payments for services on private account are likely to increase to some extent because of increased remittances of profits on foreign investment. On the other hand some economies in such payments will be possible with the development of domestic insurance and shipping services. Therefore, an increase of only about 40 per cent in invisible payments has been assumed during the Third Plan period. The liability on account of debt servicing is expected to increase from Rs. 300 million in 1964-65 to Rs. 750 million in 1969-70 and will be about 16 per cent of foreign exchange earnings in that year compared to about 10 per cent in 1964-65. The estimate is tentative and assumes some improvement in the terms on which foreign loans will be available during the Third Plan.

38. Total non-development imports during the five-year period are thus estimated to be Rs. 13,000 million. Since total foreign exchange earnings are expected to be Rs. 20,000 million, foreign exchange totalling Rs. 7,000 million will be available from the Pakistan's own earnings to finance development imports. During the Second Plan period the surplus of exchange earnings over non-development imports was about Rs. 5,280 million. The increasing availability of such surpluses is necessary to secure greater flexibility in programming development imports.

III. COMMERCIAL POLICIES

Import Policies :

39. The Second Plan witnessed a gradual but decisive liberalization of the economy from the restrictive aspects of import controls leading to a sharp acceleration in investment and increased production on account of fuller utilization of installed capacity. The shift from direct to indirect controls implicit in the reforms and improvements introduced during the Second Plan period will be intensified during the next 5 years. Despite the liberalization programme already launched, a large segment of imports is still regulated through quantitative restrictions rather than tariff policy. Future reforms of the import policy must aim at securing a further shift from quantitative controls of imports to more indirect controls through regulatory duties. The list of items on the free import list will also be examined, revised and extended where necessary, to secure a full and effective use of the country's development potential. At the same time, the tariff structure and fiscal policies will be reviewed and reshaped to ensure the best possible use of available foreign exchange resources, the rapid growth of capital goods industry and optimum efficiency of domestic consumer goods industry. In the past, tariff concessions have generally been given on an *ad hoc* basis and primarily to protect consumer goods industry. With the rapidly changing composition of the industrial programme, it is necessary to review the tariff structure to provide increasing protection to domestic capital goods industry.

40. The necessity of retaining controls on the import of capital goods for new industries and for major extensions will continue during the Third Plan, but this control will be exercised through the Industrial Investment Schedule and an increasing proportion of total resources for private industrial investment will be channelled through the development banks.

Export Policies :

41. Policies for achieving the export targets of the Third Plan will have to be pursued vigorously, including policies for the rapid expansion of production, policies for containment of domestic consumption of exportable products and a determined and imaginative policy for the development of market outlets abroad.

42. The export performance planned for the coming five years will require a major shift in the country's industrial policy. Besides improving the efficiency of

the industrial sector generally, new fields in which Pakistan has export potential must be determined as early as possible and steps taken to divert the required investment and skills to these fields. This is reflected in the programmes for the industrial sector.

43. For most products, both agricultural and industrial, for which exports are planned, domestic consumption constitutes an alternative market. It will be necessary, therefore, to adopt fiscal and other measures to restrain consumption of exportable commodities and channel increased production into the export market. The institutional framework for exports will also have to be considerably strengthened.

44. The changing composition of exports will also necessitate a change in the direction of the country's exports. In 1962-63 about 52 per cent of total exports went to Western countries, 43 per cent to Afro-Asian countries, mainly Hong Kong and Japan, and only 5 per cent to socialist countries. While efforts to expand traditional exports to Western countries must continue, the projected increase in the export of manufactures may not materialise without a significant expansion of the country's trade within the Afro-Asian region and with the socialist countries. It is in this context that the move for regional co-operation between Iran, Turkey and Pakistan assumes greater importance.

45. The Export Bonus Scheme played an important role in stimulating the export of manufactured goods during the Second Plan period. The actual working of the scheme had, however, become cumbersome due to a multiplicity of bonus rates and scheme has been rationalized by unifying all the different rates into two rates, *viz.*, 30 per cent and 20 per cent. The scheme will be continued into the Third Plan, but its impact on different items will be carefully watched. The ultimate objective must be to reduce and gradually eliminate the dependence of our industries on the Export Bonus Scheme, by strengthening export incentives through other fiscal measures and increasing the efficiency of our industrial units. A systematic review of production costs is also urgently needed to increase the competitive position of our industries in the world market.

IV. EXTERNAL RESOURCES

46. The total external resources required for the Third Plan are estimated at Rs. 15,500 million of foreign exchange and Rs. 1,000 million of PL-480 counterpart funds. The composition of these resources, together with the corresponding estimates for the Second Plan, is shown in the following table:—

TABLE 3

ESTIMATED EXTERNAL RESOURCES FOR THE THIRD PLAN

(Million Rs.)

	Second Plan	Third Plan
Project loans and grants	3,940	8,800
Commodity aid	3,310	5,500
Technical assistance ...	430	500
Private foreign investment	450	700
Total resources in foreign exchange	8,130	15,500
P. L.-480 counterpart funds	1,970	1,000
Total external resources	10,100	16,500
Total Plan Outlay including Works Programme ...	26,330	52,000
External resources as a percentage of total Plan Outlay	38%	32%

47. Thus external resources will decrease from 38 per cent of the total resources in the Second Plan to 32 per cent in the Third Plan, though in absolute terms the inflow of external resources will be about 60 per cent larger. There was a sharp acceleration in the utilization of external assistance during the last two years of the Second Plan. Compared to the estimated utilization of external resources in 1964-65, the level expected in 1969-70 will be only 37 per cent larger and will increase from Rs. 2,500 million in 1964-65 to Rs. 3,420 million in 1969-70. If the outflow on account of increased debt servicing liability is excluded, the corresponding increase will be only 21 per cent as shown in the following table.

TABLE 4

FOREIGN ASSISTANCE DURING 1965-70

(Million Rs.)

	1964-65	1969-70
Total foreign assistance*	2,500	3,420
Minus debt servicing	— 300	— 750
Net inflow of resources	2,200	2,670

* Excludes foreign assistance under P.L.-480 and Indus Basin programmes.

48. The proposed phasing of external assistance and the main assumptions regarding project aid, commodity aid, and private foreign investment are explained in the following paragraphs.

(i) *Project Aid :*

49. The unutilized balance in the project aid pipeline at the beginning of the Second Plan, *i.e.*, in 1960-61, was about Rs. 950 million but is likely to increase to Rs. 4,000 million at the end of the Second Plan because most of the project aid was committed in 1962-63 and 1963-64 and is likely to be disbursed during the Third Plan. Thus, about 45 per cent of the project aid disbursement in the Third Plan will be covered by assistance committed during the Second Plan. On the basis of the past relationship between commitments and disbursements, however, fresh commitments amounting to Rs. 7,800 million will be required to meet the expected year to year disbursements during the Third Plan as shown in the following Table.

TABLE 5

ANNUAL PHASING OF PROJECT AID DURING THE THIRD PLAN

(Million Rs.)

Year	Fresh commitments	Disbursements					Undisbursed balance as on 30-6-1970
		1965-66	1966-67	1967-68	1968-69	1969-70	
Pipeline as on 30-6-1965. (Rs. 4,000 million)		1,470	1,120	630	400	380	...
1965-66 ...	1,550	150	400	530	320	150	...
1966-67 ...	1,650	...	160	430	550	330	180
1967-68 ...	1,550	...	...	150	400	530	470
1968-69 ...	1,550	...	...	...	150	400	1,000
1969-70 ...	1,500	...	...	...	...	150	1,350
Total ...	7,800	1,620	1,680	1,740	1,820	1,940	3,000

50. These estimates assume that the average period over which the project aid will be fully disbursed will become slightly longer because of the changing composition of the development programme and that about 10 per cent of committed funds will be disbursed in the first year, 25 per cent in the second year, 35 per cent and 20 per cent in the third and fourth years respectively, and the remaining 10 per cent in the fifth year. These estimates also include project assistance channelled to the private sector through PICIC and IDBP. The volume of such assistance during the Second Plan period is estimated at Rs. 1,020 million and is expected to increase to Rs. 2,300 million during the Third Plan period. The balance in the project aid pipeline is expected to shrink by about Rs. 1,000 million over the Plan period.

(ii) Commodity Aid :

51. The balance in the commodity aid pipeline at the beginning of the Second Plan was Rs. 510 million and is expected to be slightly lower by the end of the Second Plan. The experience so far shows that about 50 per cent of the commodity aid is disbursed within 12 months of its commitment. On the basis of this relationship, it appears that fresh commitments amounting to Rs. 5,500 would be required to meet the annual disbursements projected for the Third Plan, as shown in the following Table.

TABLE 6

ANNUAL PHASING OF COMMODITY AID DURING THE THIRD PLAN

(Million Rs.)

Year	Fresh comit-ments	1965-66	1966-67	1967-68	1968-69	1969-70	Undisbursed balance as on 30-6-1970
Pipeline as on 30-6-1965 (Rs. 500 million)		450	50	...			
1965-66 ...	1,000	550	450	...	...	...	...
1966-67 ...	1,100		550	550			
1967-68 ...	1,100		...	550	550		...
1968-69 ..	1,150	...	...	...	600	550	...
1969-70 ...	1,150	...	...	...	...	650	500
Total ...	5,500	1,000	1,050	1,100	1,150	1,200	500

52. The projected utilization of commodity aid during the Third Plan assumes a continuation and expansion of the import liberalization programme and a broader definition of commodity aid. The average level of commodity aid disbursements during the Second Plan period has been Rs. 680 million per annum. However, in recent years, the quantum of commodity aid disbursements is increasing and is expected to reach a level of Rs. 950 million in 1964-65. It is expected that level of commodity assistance will gradually increase to about Rs. 1,200 million by 1969-70. The balance in the pipeline at the end of the Third Plan will be almost the same as that at the beginning of the Third Plan.

(iii) *Private Foreign Investment :*

53. The estimates of private foreign investment during the Third Plan imply a 45 per cent increase compared to that in the Second Plan but still constitute less than 5 per cent of total external resources expected during the Third Plan. Current pessimism about the inflow of private foreign investment can be ascribed to a number of reasons the most important of which is the comparative return on investment in the developed countries themselves notably Canada, Australia and certain parts of Europe. Pakistan's interest in private foreign investment is primarily on account of the technical know-how and managerial skills that accompany such investments, and these skills are more important for capital goods and other sophisticated industries. These industries are not, however, as profitable as many consumer goods industries, at least in the short run, because of the initial size of the market and inadequate supply of skilled labour and do not attract as much private foreign investment as seems potentially feasible. Despite these difficulties, it is proposed to intensify efforts to secure larger private investment from abroad during the Third Plan period.

(iv) *Technical Assistance :*

54. The need for technical assistance is likely to continue during the Third Plan period despite considerable strengthening of the domestic institutional framework. Technical assistance can play a useful role only if it is related closely to the expanding requirements of the economy in those areas in which local expertise will take time to develop. At the same time, there must be a well-defined long-range programme to fill in all the critical areas by training local talent. On a provisional basis, technical assistance requirements are estimated at Rs. 500 million for the Third Plan compared with Rs. 432 million for the Second Plan.

(v) *P.L.-480 Programme :*

55. The detailed requirements of imports under the P.L.-480 programme have not yet been determined but tentatively it is estimated that the total absorption of P.L.-480 commodities during the Third Plan period will be Rs. 3,800 million. This will mean an annual rate of absorption of Rs. 760 million and will be only slightly

more than the average rate of Rs. 700 million achieved during the last two years of Second Plan. The composition of P.L.-480 programme and the yearly requirements will be determined largely by domestic production, price trends and the success of specific policies to achieve a more appropriate cropping pattern, but it is expected that about 55 per cent of the proposed programme will be devoted to wheat imports, about 16 per cent to cotton seed and soyabean oil, about 13 per cent to feedgrain and the remaining allocation will be utilized for such items as tallow, dry milk, long staple cotton, butter oil, tobacco and other minor items.

56. On the basis of tentative estimates presented above, total accruals of P.L.-480 programme are expected to be Rs. 4,000 million, of which about Rs. 1,000 million may be available for the Third Plan as shown in the following Table.

TABLE 7

ESTIMATES OF PL-480 RESOURCES FOR THE THIRD PLAN

(Million Rs.)

Accruals		*Uses*	
Expected arrivals ...	3,800	U.S. uses	400
Custom and sales tax ...	200	Indus Basin requirements ...	2,200
		Lump sum provision for subsidy ...	400
		Available for the Third Plan ...	1,000
	4,000		4,000

57. The actual absorption of PL-480 commodities, particularly wheat, may be less than estimated if all the agricultural targets are met or exceeded. This in turn may require a more vigorous monetary policy to sustain agricultural prices and increase purchasing power to support farm incomes. Such a monetary policy will involve a higher level of deficit financing during the Plan period, providing some additional resources for the public sector.

58. The requirements of Indus Basin Works shown in the above Table are provisional and can be firmed up only when the overall question of the financing of the Tarbela project has been settled.

ANNEXURE I

BALANCE OF PAYMENTS FOR THE SECOND PLAN

(Million Rs.)

	1960-61	1961-62	1962-63	1963-64	1964-65 (Estimates)	Total 2nd Plan	Annual Percentag Increas
IMPORTS :							
I. Development :							
Capital goods ...	1,166	1,410	1,690	2,019	2,450	8,735	20.5
Raw materials for investment ...	549	459	415	652	870	2,945	12.2
Freight charges & insurance	127	209	220	270	348	1,174	28.5
Technical assistance ...	63	64	77	128	100	432	12.3
Total Development Imports	1,905	2,142	2,402	3,069	3,768	13,286	18.7
II. Non-Development :							
Consumer goods ...	570	547	563	598	645	2,923	4.4
Raw materials for consumer goods industries ...	317	334	306	339	585	1,881	16.5
Freight charges and insurance ...	67	92	93	95	134	481	19.0
Invisibles ...	328	331	352	357	370	1,738	3.3
Total Non-Development Imports ...	1,282	1,304	1,314	1,389	1,734	7,023	8.0
III. Debt servicing ...	100	120	188	243	300	951	15.8
Total Imports and Payments	3,287	3,566	3,904	4,701	5,802	21,260	15.8
FINANCED BY :							
I. OWN EARNINGS ...	2,286	2,384	2,748	2,785	3,050	13,252	7.0
II. EXTERNAL RESOURCES	924	1,165	1,475	1,963	2,502	8,129	28.5

ANNEXURE TABLE 1—*contd.*

	1960-61	1961-62	1962-63	1963-64	1964-65 (Estimates)	Total 2nd Plan	Annual Percentage Increase
Project assistance ..	390	562	681	957	1,350	3,940	37.0
Non-project assistance ...	481	449	636	788	952	3,306	18.7
Technical assistance ...	63	64	77	128	100	432	12.3
Foreign private investment	90	90	81	90	100	451	2.2
III. CHANGE IN GOLD & FOREIGN EXCHANGES RESERVES	— 56	97	— 307	70	250	54	—
IV. SHORT TERM MOVEMENTS	33	— 80	— 12	— 117	—	— 176	—

NOTES : (1) Information for the first four years, *viz.*, 1960-61 to 1963-64 is based on the balance of payments data, published by the State Bank of Pakistan. Data relating to aided imports and private foreign investment is adjusted on the basis of estimates of the Economic Affairs Division. Estimates for 1964-65 represent the projections of Planning Commission.

(2) Estimates of imports in the above table reflect payments for imports and will be higher than the corresponding physical imports published by the Central Statistical Office. The difference is mainly due to the time lag between payments for imports and their actual arrival.

(3) Imports under the P.L.-480 programme and on account of the Indus Basin Works are not included in the above Table. These data and the overall import totals are shown below.

	1960-61	1961-62	1962-63	1963-64	1964-65 (Estimates)
P.L.-480 Imports:					
Consumer goods	366	130	398	492	
Raw materials for consumer goods ...	62	147	181	84	
Freight charges and insurance	75	19	43	69	
Total P. L.-480	503	296	622	645	740
Indus Basin Imports	60	170	300	400	430
Total Imports including P.L.-480 and Indus Basin Imports	3,850	4,032	4,796	5,746	6,992

ANNEXURE II

BALANCE OF PAYMENTS PROJECTIONS FOR THE THIRD PLAN

(Million Rs.)

	1965-66	1966-67	1967-68	1968-69	1969-70	Total Third Plan	Annual Percentag Increase
IMPORTS :							
I. Development :							
Capital goods ...	2,520	2,630	2,790	2,930	3,050	13,920	4.5
Raw materials for investment ...	950	1,050	1,170	1,380	1,570	6,120	12.7
Freight charges and Insurance	355	365	390	410	440	1,960	4.2
Technical assistance ...	100	100	100	100	100	500	—
Total Development Imports	3,925	4,145	4,450	4,820	5,160	22,500	6.5
II. Non-Development :							
Consumer goods	670	700	720	740	760	3,590	3.3
Raw materials for consumer goods industries ...	600	670	750	820	920	3,760	9.0
Freight charges and Insurance	135	135	140	155	165	730	4.3
Invisible payments ...	390	400	410	445	465	2,110	4.8
Total Non-Development Imports ...	1,795	1,905	2,020	2,160	2,310	10,190	5.8
III. Debt Servicing :	380	470	560	650	750	2,810	20.0
Total Imports & Payments	6,100	6,520	7,030	7,630	8,220	35,500	7.3
FINANCED BY:							
I. Own earnings ...	3,280	3,570	3,950	4,400	4,800	20,000	9.5
II. External resources ..	2,820	2,950	3,080	3,230	3,420	15,500	6.5
Project assistance ...	1,620	1,680	1,740	1,820	1,940	8,800	
Non-project assistance ...	1,000	1,050	1,100	1,150	1,200	5,500	
Technical assistance ...	100	100	100	100	100	500	
Private foreign investment	100	120	140	160	180	700	

NOTES:— (1) P.L.-480 and Indus Basin imports are excluded from the above Table.

(2) The annual phasing of exports shown above is uneven because of the need to balance the Table. Shortfalls or increases in actual exchange earnings will lead to corresponding adjustments in the exchange reserves.

CHAPTER VII

PRIVATE INVESTMENT

The private sector plays a vital role in the economic development of Pakistan. The importance of the private sector is not adequately measured by its share in total investment—private and public together—as the public sector is primarily concerned with the creation of infra-structure and the provision of such services as tend to increase the general productivity of the economy. Directly productive investment, building upon the infrastructural and social services provided by the public sector, is left as the primary responsibility of the private sector.

2. Rapid progress in creating the economic infra-structure and other basic pre-requisites for economic development made it increasingly attractive to the private sector to exploit the productive possibilities of the economy and to increase the country's national income. The growth of the gross national product by industrial origin indicates clearly that the greater part was generated through the efforts of private entrepreneurs in agriculture, industry, trade, construction, transportation and other sectors.

Past Performance of the Private Sector

3. In the past, investment in the private sector, relative to the investment in the public sector, followed an uneven course. In the early years, before comprehensive development started, the private sector naturally assumed a greater proportion of the total investment in the country. About 60 per cent of fixed monetized investment in 1949-50 was in the private sector; this proportion increased to 67 per cent in 1954-55, just before the First Plan was launched. However, the private sector's performance was limited by the absence of infra-structure and the basic services which only the state could provide. The First Plan, therefore, was marked by a great emphasis on public sector investment; and by 1959-60 the share of the private sector in the total fixed monetized investment had come down to 34 per cent. This decrease of the private sector's share in total investment did not result in any absolute decline of private investment; in fact private investment by the end of the First Plan was about 30 per cent over the level in 1954-55, but public investment increased very much faster. During the Second Plan period the share of the private sector increased again, and it is estimated that in 1964-65 it will be around 46 per cent of total monetized fixed investment. If non-monetized investment and changes in stocks are also included, the share of the private sector to the total investment will be considerably higher than indicated above.

Private Sector in the Third Plan

4. The Third Plan has special significance for the development in the private sector. The Plan must make adequate provisions so that the private sector can achieve what is expected of it. It should be recognized, however, that there can be no direct planning for the private sector in the same sense as planning in the public sector. Planning for the private sector can only be indirect, through the adoption of policies which can stimulate and guide both the magnitude and direction of private investment.

5. The magnitude of total investment in the private sector during the Plan period will depend on the savings efforts of the country, the extent of external aid and the magnitude of investment in the public sector. The size of the public sector programme obviously draws resources from the private sector, but the level of private savings after tax depends at least as much on the investment climate which the public sector creates through its programme and its policies. There is no guarantee that the private sector will implement a programme of a proposed size unless adequate policy measures are taken to ensure it. A private investor is largely guided by the profit motive and his decisions are governed by the opportunities of earning profits from ventures in alternative directions. Government policies related to taxation, tariffs, credit, imports, the regulation of the consumer market, and controls of physical and other nature, provide incentives or disincentives to private investors and producers.

6. The relative shares of public and private sector investment under the Third Plan is based on an assessment of past achievements and of the requirements for the future. The growth of private sector investment during the Second Plan period has been more than expected. The investment targets in the public and private sectors and the expected achievements are as follows:

	Rs. Million	
	Target	*Achievement*
Public Sector (including rural works programme)	16,220	14,830
Private Sector	8,380	11,500
Total:	24,600	26,330
Private Sector as percentage of total	34.1	43.7

7. It is apparent from the above figures that while the private sector was expected to make investment up to Rs. 8,380 million, which was only 34 per cent of the total Second Plan investment target; the realisation has been about Rs. 11,500 million, making a proportion of a little less than 44 per cent of the total actual investment. The rate of increase in private investment over the Second Plan

period has also been impressive. From an estimated figure of Rs. 1,457 million in 1960-61, private investment in 1964-65 is expected to rise to Rs. 3,181 million, showing an increase of 118 per cent. Liberalisation of import and investment controls, development of credit agencies, liberal supplies of basic development inputs, creation of an institutional framework, etc., have helped the private sector to make such investments. The difference in the target and the realised share of the private sector is due not only to over-fulfillment of financial targets in the private sector, but also to the short-fall in the public sector.

8. This lesson of the Second Plan has dominated the allocation of investment to the public and private sectors under the Third Plan. The share of the private sector in the total investment target of Rs. 52,000 million has been fixed at Rs. 22,000 million, which is over 42 per cent. Thus the share of the private sector as a proportion of the total has remained nearly the same. It is expected that private investment will maintain a steady growth during the Third Plan period. The projections indicate that it will increase from Rs. 3,181 million in 1964-65 to Rs. 5,200 million in 1969-70, showing a growth of 63 per cent.

Difference in Emphasis on the Private Sector in East and West Pakistan

9. There will, however, be a difference in the role of the private sector under the Third Plan in East and West Pakistan. The experience of the Second Plan shows that the private sector is relatively less active in East Pakistan. There is no firm estimate of private investment for East and West Pakistan separately, but available information indicates that only about one-third of the total private investment during the Second Plan period will have been made in East Pakistan. This forms only 35 per cent of total investment in that wing. The remaining two-thirds of the total private investment will have been made in West Pakistan, which forms 48.5 per cent of the total investment in that province. Thus, it is obvious that while in West Pakistan the private sector dominated the growth of the economy, in East Pakistan the level of performance has been lagging.

10. It is planned, therefore, to foster a rapid growth of the private sector in East Pakistan. The Third Plan envisages a target of Rs. 11,000 million investment in the private sector in that wing. This forms 50 per cent of total private sector investment in the country, as compared to about one third realised during the Second Plan. This is definitely a high target, and calls for determined efforts on the part of the Government and the people to achieve this. It involves a sizeable transfer of private investment funds from West to East Pakistan, and calls for a set of policy measures specially designed to foster this regional reorientation of the private sector.

11. One of the causes for the relatively unfavourable record of the private sector in East Pakistan is the absence of infra-structure and of social overheads

required to promote and support private enterprise. Although considerable progress has been made in this respect during the Second Plan and conditions for profitable private investment are much more favourable now than at the end of the First Plan, there is still considerable leeway to be made up during the Third Plan.

12. This calls for a substantial investment for the creation of infra-structure and institutional framework in East Pakistan in the absence of which private enterprise cannot play its role. The implication is that there must be sufficient investment in the public sector to provide this need. This complimentarity between public and private investments must be realized. Public investment is a pre-requisite to private investment, at least in the early phase of development. Until enough has been done to train the rivers and to regulate and distribute water for irrigation, the private farmers are severely hampered. The subsidy on fertilizer is a necessary aid to the farmer to make investment. Investment in land are urgently necessary in order to provide the basis on which to build industrial centres and to create housing facilities for the workers. Construction and improvement of roads, railways, waterways, ports, etc., are indispensable for private enterprise to transport and market their output. Public investments on education and health are required for improving the quality and quantity of manpower needed in the private sector.

13. Recognition of the need for the creation of infra-structure and basic developments has led to the emphasis on the public sector in East Pakistan, but not at the expense of the private sector. Instead, it is intended for the promotion of it. The allocation of Rs. 11,000 million in the private sector may not be fully used in a productive manner unless the Government ensures it through definite policy measures.

14. In West Pakistan, the allocation for the private sector is Rs. 11,000 million, out of the total of Rs. 25,000 million. In terms of the proportion of the total it is 44 per cent, as compared to 48.5 per cent realised in the Second Plan. The increased domination of the public sector is due to the need for completing a large number of on-going projects, the high requirements of the water-logging and salinity programme, and the emphasis on heavy industries. The dynamic private sector in West Pakistan can easily meet the investment targets for this wing, and should nevertheless be able to transfer sizeable investment resources to East Pakistan to foster economic growth in that wing, which is essential for the balanced growth of the national economy.

Allocation in the Private Sector

15. Investment allocations in the private sector to the various fields have to be based on an assessment of demand, the supply of inputs, the presence or absence of complementary factors, the psychology of the private investors, and above all, the government policies aimed at directing private investments. The Third Plan envisages the following distribution of private investment:

(Rs. million)

	East Pakistan	*West Pakistan*	*Pakistan*
Agriculture	2,100	1,900	4,000
Water	70	300	370
Power	30	250	280
Industry	3,800	4,500	8,300
Fuel and Minerals	300	450	750
Transport & Communication	2,100	1,800	3,900
Housing	2,350	1,650	4,000
Education	200	100	300
Health	20	20	40
Social Welfare	20	20	40
Manpower	10	10	20
	11,000	11,000	22,000

The rationale of the investment allocation to each sector is discussed below.

INDUSTRIES

16. The most important field in which the private sector is expected to play the vital role, is manufacturing industries. In view of this, the largest share of the total provision for private investment under the Third Plan has gone to this Sector. An allocation of Rs. 8,300 million has been provided which comprise 38 per cent of the total private sector allocation. Of this, the provision for East and West Pakistan are Rs. 3,800 million and Rs. 4,500 million, respectively.

17. During the First Plan period, an investment of Rs. 1,268 million had been made in private manufacturing industries against the Plan provision of Rs. 1,735 million. There was, therefore, a 27 per cent short-fall in the realisation of the private sector investment target of the First Plan. However, the record during the Second Plan period has been more encouraging. The Second Plan envisaged an investment in fixed assets of Rs. 2,732 million in the private sector, Rs. 1,005 million in East Pakistan and Rs. 1,727 million in West Pakistan. These sums do not include the investment in the Karachi Oil Refinery amounting to Rs. 120 million, which was sanctioned before July, 1960 and the investment in the Karachi Steel Mill amounting to Rs. 650 million, which was originally proposed to be established in the public sector, but was later transferred to the private sector. Including these two projects the Second Plan target fixed investment comes to Rs. 3,502 million. In addition, there was a provision of Rs. 928 million for investment in working capital, of which Rs. 344 million was for East Pakistan and Rs. 584 million for West Pakistan.

18. Actual sanctions against Second Plan allocation are expected to amount to Rs. 5,825 million, and utilization to Rs. 3,376 million. For the provinces the sanctions and utilization are respectively Rs. 1,652 million and Rs. 1,279 million in East Pakistan; and Rs. 4,173 million and Rs. 2,097 million in West Pakistan. The position with regard to Second Plan allocation, sanction and actual utilization is presented below.

(Rs. million)

	East Pakistan	*West Pakistan*	*Pakistan*
Allocation	1,005	2,497	3,502
Sanction	1,652	4,173	5,825
Utilization	1,279	2,097	3,376
Utilization as percentage of			
Allocation	127	82	96
Sanction	77	50	58

19. The above figures are inclusive of investments in the Karachi Oil Refinery and the Karachi Steel Mill which were not included in the Second Plan provision, but exclude working capital. If it is assumed that the investment targets in working capital have been fully realized, and if we exclude the Karachi Refinery and Steel Mill the comparative position of Second Plan provisions and achievements stand as follows:—

(Rs. million)

	East Pakistan	*West Pakistan*	*Pakistan*
Fixed Investment			
Allocation	1,005	1,727	2,732
Sanction	1,652	3,404	5,055
Utilization	1,279	1,927	3,206
Utilization as percentage of			
Allocation	127	112	117
Sanction	77	57	63
Working Capital			
Allocation Utilized	344	584	928

20. Analysis of the performance of the private sector in industries leads to the following conclusions:

(*a*) In East Pakistan utilization will exceed Plan provision;

(*b*) In West Pakistan utilization will exceed Plan provision, if the Karachi Oil Refinery and Steel Mill are not included for comparison; including these two projects the realized investment would fall short of the total provision;

(c) For Pakistan as a whole, the achievement for private investment will be in excess of Plan target except that the slow progress of the Karachi Refinery and Steel Mill makes the picture worse.

(d) The ratio of sanction to Plan allocation is higher for West Pakistan as compared to East Pakistan; but in the utilization of sanctions, East Pakistan's record is more favourable.

21. The major lesson which can be drawn from the performance during the Second Plan is that the private sector in Pakistan is very dynamic and can be relied upon to achieve the targets set for the Third Plan. The recent performance in East Pakistan has been particularly encouraging. These lessons have guided the private sector allocations under the Third Plan. The allocations are Rs. 3,800 million for East Pakistan, which is 134 per cent higher than the realized investment in fixed and working capital during the Second Plan; and Rs. 4,500 million, for West Pakistan, which is 79 per cent higher than the realized investment during the Second Plan. The higher acceleration for East Pakistan is necessary in order to achieve the higher rate of growth in that wing, and special measure will be introduced to permit the achievement of this growth.

Policy requirements for private investment in industry

22. It must be fully realized that the targets for private investment in industry under the Third Plan are very ambitious, with regard to size as well as to structure. In the Industries chapter the investments are specified in broad categories of industries, and some guidelines have been indicated with respect to ownership in order to prevent the growing concentration of economic wealth in the hands of a few families. To achieve all these goals, utmost efforts have to be made by the Government and the private sector. Definite policy measures are necessary to implement the industrial investment programmes in the private sector and special measures are required to meet the high investment target for East Pakistan. Some important measures are discussed briefly below.

23. Industrial land is a pre-requisite for establishing industries. There is a particular problem in East Pakistan and the Third Plan industrial programme will require several thousand acres of raised industrial land at suitable locations. The government must take steps to build up industrial towns and allot plots to private parties, so that the paucity of land will not prevent the private sector from achieving its industrial targets. The Government of East Pakistan is contemplating an Urban Land Development Organisation. A similar organisation should be set up in West Pakistan. These organisations should also undertake research work on location of industry and work out long-term plans for the location of industrial centres.

24. The public sector programmes must be geared to infra-structure, like water, power, transport and communication in the areas where the industries are supposed to be established. The industry programme in the public sector must develop industrial complexes, such as engineering and chemical industries, which create external economies that attract private industry.

25. Special efforts must be made to create facilities and competence for drawing up industrial projects. Sound projects are the pre-requisite not only for obtaining institutional financing, but also to ensure success in actual implementation. The Plan provision of Rs. 8,300 million in the private sector will require a large number of projects, probably something between 4,000 and 6,000. This is a huge task which can be performed only by competent people. The Industrial Advisory Centre can render valuable service in this direction and should establish offices at various locations, especially in East Pakistan where the experience of starting industrial undertakings is limited. Competent local consulting firms must be developed, but this can be done only when sufficient numbers of cost accountants, engineers of various categories, economists etc., are trained to man them.

26. Closely connected with the need for skill for project preparation is the need for managerial and technical skill to run the industries. Industrial development can not be sustained unless there is an adequate flow of trained managerial and technical personnel. At present, there is a scarcity of competent business executives, and the work is to a large extent done by the investor's family members. This situation can not last long, and at least not sustain the planned industrial growth. The need is greater in East Pakistan, where experience in industrial operation is so limited. Creation of a cadre of industrial managers should be considered. The Government should recruit every year a group of promising young people to form a Managerial Service who will be trained at home and abroad, for being entrusted with the management responsibility of public sector projects. The private sector should be allowed and encouraged to draw from this pool on temporary or permanent arrangements. This experiment will be particularly worthwhile for East Pakistan.

27. Within the framework of the Plan, with regard to structure, location and ownership, the private investors should be free to invest in the industries of their choice and get their machines and raw materials with the least possible interference by the Government. The discipline as to the industrial development pattern set forth in the Plan, should to the extent possible be enforced through indirect policy means rather than through direct control by the Government. The relaxation of direct controls during the Second Plan period has had a favourable impact on the performance, capacity utilization and growth of the private industries. The procedure of sanctions should be further streamlined and rationalized. Considerable delegation of sanctioning authority for specified categories of projects is required.

Such delegation calls for clear and detailed guidelines for sanctioning, to assure that the procedure will be in accordance with the norms for industrial development set out in the Plan.

28. Adequate equity capital has been, and will continue to be one of the main bottlenecks, and the more so when the ownership has to become increasingly diversified to counteract the concentration of wealth. Capital is particularly scarce in East Pakistan, and it should be possible to pool the savings of the middle class families to provide equity basis for small and medium sized industries. The EPIDC has worked out, in collaboration with the IDBP, a novel mechanism whereby entrepreneurs of limited resources are allowed to participate in the setting up of jute mills, with the prospect of ultimate ownership. This experiment can be tried in other fields also.

29. Institutional credit should be continued and extended. The operation of the PICIC and the IBDP should be made to conform to the requirements of the Plan. These institutions, particularly PICIC, are at present required to advance loans according to the conditions of the lending sources. This has primarily resulted in the advancement of loans to big industrialists in West Pakistan. The institutional frame-work for credit should be redesigned to broaden the base for economic democracy and also to meet the special requirements of private investment in East Pakistan.

30. The flow of direct foreign investments into industry in Pakistan during the Second Plan has been of the order of Rs. 450 million. It is expected to be around Rs. 700 million during the Third Plan. Foreign investment will continue to be encouraged especially in sectors involving technical know-how and managerial skill. Of course compared to the total dimension of the Plan the expectation of foreign private investment is quite small.

31. Special measures, in addition to those mentioned above, have to be taken to mobilize resources for East Pakistan in order to meet the Plan's requirements for private industrial investments.

32. The public sector allocation to manufacturing industries in the Third Plan is Rs. 4,580 million. This figure includes provisions for industrial estates, for schemes of research and training and for promotional programmes. Government investments in manufacturing industries through the Industrial Development Corporations and other Government sponsored Corporations is planned to be Rs. 3,762 million. These investments will be complementary rather than competitive to the private investments. Industrial investments in the public sector have primarily taken place in fields which have been of greatest importance not only for the industrial development but also for the development of other sectors, *e.g.*, agriculture; and where private investment have not come forth because of the rela-

tively greater risk and lower profit expectations. Infra-structural effects an external economies have been the dominating motive for these investments rath than direct profit expectations. That will be the case also under the Third Pla However, the on-going industrialisation will gradually increase the profitability o many of these enterprises. As a measure to counteract the concentration of wealt and to promote economic democracy, dis-investment of Government owned o controlled industries should primarily be done by converting them into publi companies with a relatively large number of shareholders.

33. Temporary excess capacities may appear in some industries because of shortage of raw materials, of skilled manpower or of demand for the products. The planned sectoral distribution of the allocations, private and public sectors taken together, aims at a balanced industrial growth, to avoid more permanent capacity excesse and bottlenecks. An equally important pre-requisite for obtaining balanced growt is a systematic flow of information about the actual industrial development, to and from the investors, the financing institutions, the Government agencies an all other parties concerned. A broad Industrial Information Service has to b organized, and, in addition, the Government's statistical service improved.

AGRICULTURE

34. Production in agriculture is done almost wholly within the private sector, with the effort of the public sector confined mainly to promoting and assisting private enterprise. The Government programme is designed, for example, to meet the cost of administration of public organisations concerned with agriculture, agricultural subsidies, irrigation works, research, extension and other related developmental activities. Only in a few instances, such as certain aspects of forestry, is the Government concerned with the production of goods and services in agriculture.

35. Given the promotional nature of government activity, large supplemental capital investments are also required by private farmers. The Second Plan, for example, envisaged an investment of Rs. 905 million. While precise data are not available, there is increasing evidence which suggests that investment in agriculture went far beyond the Plan provision. With this fact in mind, the Third Plan provides Rs. 4,000 million for private investment in agriculture. In addition, much of the water investment can be broadly defined as being "agricultural". Taking these two categories together the target for private investment in agriculture comes to Rs. 4,370 million, Rs. 2,200 million for West Pakistan, and Rs. 2,170 million for East Pakistan.

36. Before outlining the various private agricultural investments, it is necessary to clarify the definitional position. The concept of *public* investment in agriculture,

as envisaged in the Plan, does not conform to the standard of economic definition of investments. It includes many items, such as fertilizer and organisational expenses which are development expenditures, but which are not "investments" in the strict sense of the term. A question, therefore, arises whether the definition of investment in the *private* sector should be the same as in the public sector, or whether it should conform more closely to the standard definition. Though the choice is arbitrary, the standard definition has been used which, therefore, includes: private development of lands, private improvements in irrigation facilities, additions to farm buildings and implements, and increases in livestock. It should be noted, however, that since the definition of private investment does not include such items as fertilizers, which are here considered as "current inputs", there is a conceptual asymmetry between investment in the public and private sectors.

37. Unfortunately, there is inadequate information to identify precisely the various components of private investment in agriculture noted above. Work currently in progress in the Central Statistical Office (CSO) is expected to provide firm estimates; however, until such time, rough orders of magnitudes can be estimated from a number of surveys on rural Pakistan. One recent synthesis of survey material indicates that in 1964-65 approximately Rs. 750 million will have been invested in Agriculture, of which more than half in West Pakistan. Assuming a 5 per cent per annum increase, private investment in the Third Plan would come to about Rs. 4,340 million. The Third Plan provides for an allocation of Rs. 4,370 million investment in the private agriculture and water sectors. The slightly greater magnitude of private investment shown for water and agriculture in West Pakistan is consistent with the spurt of private investment in tubewells and tractors made in recent years, which more than offsets the smaller investments on the larger number of farms found in East Pakistan. Again, it must be emphasised however that these data are very rough, and are subject to modification pending results of the CSO survey.

Policy Requirements for Private Investment in Agriculture

38. There is a need for adopting clear policies to induce private producers to invest in agriculture. In this connection, perhaps the most important requirement is that the Government execute expeditiously its own projects in the fields of irrigation, flood protection, etc., to provide the overhead facilities so necessary for a large private programme. In addition, the Government, through economic policy must create a climate which helps to assure profitable investments in the rural economy.

39. Many specific policies with regard to subsidies, price support and stabilization, marketing, education, etc., have been detailed in the Agricultural and Water and Power chapters, and will not be repeated here. However, several points are

47. Credit system has so far played only a minor role in promoting building activity in the private sector. House Building Finance Corporation is the only institution active in this field, as bankers are unwilling to extend credit against immovable property. Not only is there urgent need to strengthen the Corporation with more funds placed at its disposal, but also to evolve an institutional frame-work suitable for financing house-building activity. Savings and Loan Associations have proved extremely successful in other countries. A beginning has been made in this direction through the setting up of such an association at Karachi with private initiative. More such associations should be set up at Lahore and Dacca with suitable encouragement provided by the Government.

48. The greatest factor in fostering building activity in the last few years, has been easy availability of building materials, such as cement, structural steel, bricks etc. This trend must be continued. Local manufacture and import should be planned ahead to avoid scarcity at any time. The position with regard to structural timber is still not fully satisfactory. Standardisation of doors and windows and pre-fabrication of building components may solve the problem and will also encourage local industries.

49. Heavy investment in developing residential areas should be the responsibility of the city development corporations. Plots for building private houses should be available in larger numbers. The establishment of an Urban Land Development Organisation in East Pakistan is expected to go a long way in this direction.

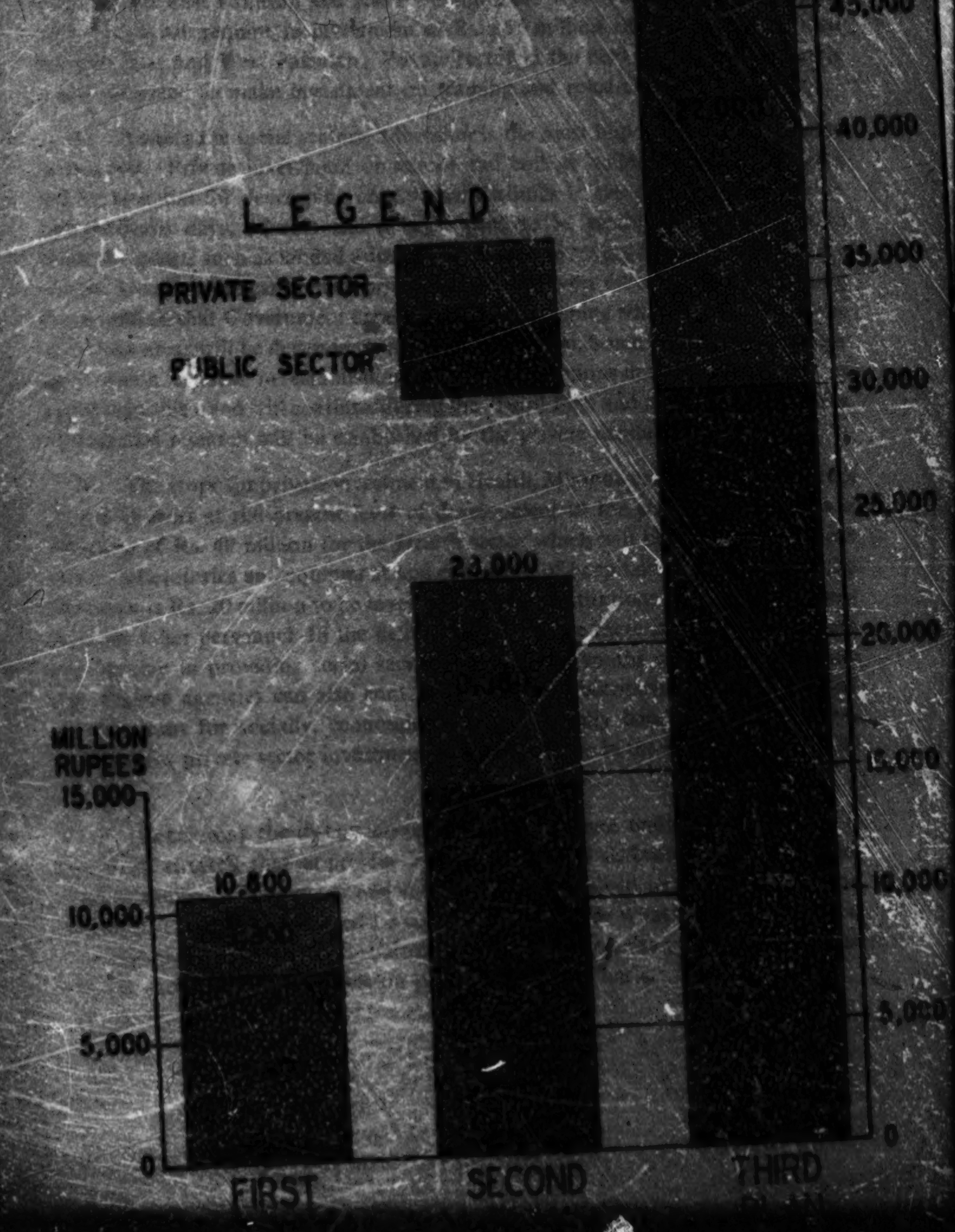
Other Sectors

50. Agriculture, industries, transportation and housing cover more than 90 per cent of the total private sector investment under the Third Plan. The total investment allocations for these sectors come to Rs. 20,200 million; the remaining Rs. 1,800 million investment is thinly spread over Water and Power, Fuels and Minerals, and the social sectors of Education, Health, Manpower and Social Welfare.

51. The allocation for private investment in Water and Power is Rs. 650 million, of which Rs. 100 million is for East Pakistan and Rs. 550 million is for West Pakistan. The allocation for West Pakistan includes an investment of Rs. 135 million by the Karachi Electric Supply Corporation which is treated as a private agency. The remaining allocation is mainly for installation of irrigation tube-wells.

52. The private investment in the field of fuels and minerals will mainly be in exploiting various fuels and minerals resources. The total investment during the Third Plan has been fixed at Rs. 750 million, Rs. 300 million in East Pakistan and Rs. 450 million in West Pakistan. Oil and Gas prospecting companies are expected

SHARE OF THE PUBLIC AND PRIVATE SECTORS IN THE FIRST, SECOND AND THIRD PLANS



worthy of re-emphasis. In spite of the phenomenal growth that occurred in the Second Plan in such investments as tube-wells, low-lift pumps and tractors, the unavailability of certain types of equipment, including spares, tended to put an unnecessary damper on investment. A more liberal import policy is critical if investment in these items is to continue to increase at a rapid rate. Two other types of facilities are also critical. A large increase in institutional credit will be necessary for the expanded programme and in addition, a greater emphasis must be placed on service and repair facilities, especially in East Pakistan, for only by concerted action on these fronts will agriculture be able to meet the private investment targets set for the next five years.

TRANSPORT AND COMMUNICATION

40. The importance of transportation of goods and passengers in a developing country cannot be over-emphasised. The output of agriculture, industries, mines, etc., must be moved from producers to consumers within the country and abroad. Likewise, imported goods in ports must be handled and transported to destinations. For a developing economy, transportation need will grow at a considerably higher rate than the growth of the GNP, because of increased inter-dependence for supply of goods and more than proportional growth of transport intensive sectors. Except for movement by railways, the transportation operation is mainly done by the private sector. The public sector is responsible for the construction of roads, bridges, ports, etc., but actual operation of transport is left to the private entrepreneurs, except the limited operation by public road transport agencies and some parts of water transport in East Pakistan. Inland water transportation is, however, largely the responsibility of the private sector. For the Plan, the Shipping Corporation, PIA and Port Trusts are included in the private sector, but these are controlled by the Government.

41. In the Second Plan, an allocation of Rs. 1,323 million was made for the private transport and communication sector. This included investment by the semi-public bodies. While information regarding the implementation of the programme of the semi-public bodies is available, there is inadequate information on the investment by the private sector on buses, trucks, cars, boats, etc. It is expected, however, that the Second Plan investment targets in the private sector will be fully realised.

42. The Third Plan postulates an investment of Rs. 3,900 million in the private transport and communication sector; Rs. 2,100 million in East Pakistan and Rs. 1,800 million in West Pakistan. The most pressing requirements for implementing these targets are that the public sector programmes of construction of roads and bridges, development of ports, waterways, landing stations etc., are expeditiously completed and that there should be easy import of buses and trucks by the

private investors. Research for improved inland vessels should be conducted to encourage the private operators to invest in inland water transport. Easy credit would be needed to induce the private sector to make such investment.

HOUSING

43. The growth of population and the continued high rate of urbanization will create added pressures on the housing situation in the country during the Third Plan period. This will add to the sizeable back-log of unsatisfied demand for housing in urban areas, congestion and slums and the depressed living conditions in the villages. While the public sector programme in this field is directed towards making available necessary amenities, the construction of houses for low-income groups by the Government would meet only a small proportion of the need. The main construction activity is to be carried on by the private sector. In terms of investment, housing programme in the private sector ranks at par with agriculture and only next to industries. The total allocation of Rs. 4,000 million accounts for a little less than one-fifth of the total private sector programme in the Third Plan and is more than double the programme for private housing in the Second Plan.

44. Data on private sector housing is not quite satisfactory. While there is evidence that construction activity has been impressive in the last few years, it is difficult to determine how much of it was for residential housing. It has been estimated that only 50,000 houses were actually constructed in newly developed residential areas during the Second Plan period. While in financial terms the programme was probably implemented in line with the Second Plan allocations, both on account of the higher cost of construction and the larger proportion of bigger units, the private sector programme for housing was not fully implemented in physical terms.

45. In the Third Plan, it is proposed that with an allocation of Rs. 4,000 million, 212,500 dwelling units may be constructed in the private sector. Of this, 50 per cent should be for low-income groups, 40 per cent for middle-income groups and only 10 per cent for higher-income groups. Even in the limited allocation for upper-income housing, care will have to be exercised to keep the costs low and avoid the construction of luxury houses.

46. As a considerable acceleration is proposed in the programme for private housing construction, both fiscal incentives and credit availability would have to be considerably improved, if a short-fall of the type experienced in the Second Plan is to be avoided. The burden of taxation converging from three levels of Government on income from house property has reduced the net return from house property below economic level. This situation needs to be corrected through a carefully devised system of tax concessions and relief.

to invest about Rs. 225 million ; Rs. 120 million in East Pakistan and Rs. 105 million in West Pakistan. Transmission and distribution of gas will be another field of major investment by the private sector ; for this Rs. 75 million has been provided for East Pakistan and Rs. 160 million for West Pakistan. Coal and peat exploitation will require an investment of Rs. 165 million, almost equally divided between East and West Pakistan. Private sector in the field of fuels and minerals is also expected to make investment on training and research.

53. Among the social sectors, education is the most important field of private investment. Private investment on school and college buildings and equipments will be essential for developing educational facilities in the country. In the pre-Independence days, schools and colleges used to be established by the private philanthrophists such as landed aristocrats. This is no longer the case in Pakistan ; but the Government can induce private people to invest on education by making it a condition that Government expenditure for developing educational institutions at various areas will be dependent on local contribution. Some big industrial groups have shown interest in establishing technical institutions in the big cities. It is hoped that this trend will continue during the Third Plan and more institutions for training and research will be established by the private capitalists.

54. The scope for private investment in Health, Manpower and Social Welfare is limited at least at the present level of development of the economy. There is a provision of Rs. 40 million for the Health sector which will be invested in private clinics, laboratories and equipment and expansion of hospitals. For Manpower the allocation is Rs. 20 million to be invested in private institutions for training apprentices and other personnel. In the field of social welfare there is a scope for private participation in providing social services to children, youths and families needing help. Private agencies can also contribute to the establishment and improvement of institutions for socially, economically and physically handicapped. The total provision for private sector investment on social welfare in the Third Plan is Rs. 40 million.

55. Concluding the discussion on private investment under the Third Plan it should be stressed that at present information about investment in the private sector is limited. The figures and the proposals contained in this chapter are on the basis of data which should be continually reviewed. What is urgently needed is to organise studies on the problems, performance and the needs of the private sector in order to take decisions on policy on a firmer basis.

CHAPTER VIII

ECONOMIC PROBLEMS AND POLICIES

Rapid economic growth brings in its wake new problems and fresh challenges. It is necessary in a continuing strategy for economic development to have a national recognition of these problems and to strive for solutions which can easily be integrated with the growth objectives. It is the nature of response to the newly emerging set of problems which ultimately determines the speed at which the economy can grow over a long period. It was inevitable that the growth of production experienced in Pakistan during the Second Plan period should create concern about its equitable distribution and turn peoples' minds to the problems of better social service on the way to a Welfare State. In a society which attained political emancipation only within this generation, it is natural that expectations of better conditions of life should grow rapidly when there is evidence around of growing prosperity and of vast economic progress. The Third Plan is based on a recognition of the rising expectations of the people and makes several concrete proposals for ensuring greater social justice. But, before those issues are taken up, the economic scene should be reviewed with complete detachment and objectivity to identify the still lingering weaknesses in the economy and the measures needed to deal with them in the coming years.

2. The main focus of all efforts in the economic field so far has been to create a favourable frame-work for greater production. To a large extent, the First and Second Plans have succeeded in achieving this. Considerable infra-structure was built during 1955—65 by devoting over 60 per cent of the total investment to this purpose. The economy is now generating growth rates of over 5 per cent per annum. But, before one can assume that this growth pattern can be cosolidated and accelerated further, it would be proper to examine where the growth impulses are still weak and uncertain and need to be strengthened.

3. The sustained growth in agricultural production is only a recent phenomenon ; it must be analysed carefully to determine the extent to which it is based on a permanent institutional change and the degree of its being the result of certain isolated though essentially sensible policies. There is no doubt that the 3.5 per cent growth rate in agriculture achieved during the Second Plan period was based on a major increase in the availability of water and fertilizer. But the degree of the dependence of agriculture on climatic factors is still immense, resulting in wide fluctuations in the level of agricultural production. Despite rapid improvement in food crops there was a sizeable deficit of more than a million tons at the end of Second Plan between domestic production of foodgrains and requirements at the relatively low *per capita* consumption levels. The situation can assume serious proportions in years characterized by unfavourable climatic factors and other natural calamities.

4. Further acceleration in agricultural growth rate is planned in the Third Plan by improving the availability and absorption of key inputs such as fertilizer and water as well as of better seeds and pesticides. But the continued growth in the agricultural sector over the longer run demands that there should be motivation on the part of the farmers to keep increasing their productivity ; there should be adequate outlet for marketing of agricultural produce and a price policy to ensure that the farmer obtains a reasonable return for his hard labour. There should also be research and promotional effort to develop the most suitable cropping patterns for the optimal use of land. The Third Plan projects a growth rate of 5 per cent in agriculture and the Perspective Plan assumes that the average growth rate of about 5.6 per cent can be maintained for a sustained period of 20 years. These expectations may prove too sanguine unless the institutional framework for agriculture, including credit facilities for the farmer and marketing arrangements is considerably strengthened.

5. The growth impulses in the industrial sector have been more firm and less uncertain than in the agricultural sector in the last 16 years of development. But high rates of growth in a highly protected market have tended to mask the basic problems of the relative inefficiency of the industrial sector, lack of appropriate technology and technical skills, and absence of any definite relationship between industrial programming and market demand. The cost of many industrial products has not come down even after a decade of production experience and many of our industries can still not compete in the international market except through special incentives. Since it has continued to be a seller's market, very little attention has been paid so far to the improvement in the quality of industrial products to cater to the increasingly sophisticated requirements of the urban areas. Most of the industrialisation is "imported" in the sense that the import component of raw materials, spare parts and machinery is predominant in the installation and operation of industrial capacity and very little research has gone into the use of alternative domestic raw materials or technological adaptation. Consequently the value added in some consumer goods industries has been fairly small. There has been practically no development of basic industries. Even after 15 years of high industrial growth rates, the country cannot claim to have built up a sufficient reservoir of technical skills on which it can draw for the next phase of more sophisticated industrial development.

6. Even though the last two Plans have concentrated heavily on the creation of adequate infra-structure, certain imbalances still remain. Transport continues to be a bottle-neck and it is one of the major factors inhibiting harmoneous economic development. While development of power-generating capacity has increased sharply, the demand appears to be continuously running ahead, indicating a higher priority for this particular activity in subsequent Plan periods. The allocations in the field of domestic education have not been geared adequatley to the

manpower requirements of future development with the result that very little has been spent so far. Any further neglect of this important Sector cannot only pose a threat to Expected returns from Existing investment (as is evident from recent power failure) but will also prove a serious handicap in the Fourth Plan period. Again while the economic and social infra-structure has been greatly strengthened in most parts of West Pakistan, it continues to be inadequate in East Pakistan and in certain less-developed areas of West Pakistan. Financial institutions despite their phenomenal growth in the urban areas have yet to make a real impact on the country side.

7. One of the most complex problems which a developing economy has to resolve is the tendency of income distribution to move in the direction of growing inequalities. Economic growth often creates and is fostred by inequalities in income. In the absence of a high average *per capita* income which can be the basis of the national saving effort or adequate financial institutions which can mobilise ordinary savings for national development, the saving process proceeds, almost inevitably in a small capitalistic sector, unless the Government undertakes the job itself. In Pakistan the process of rapid industrialisation based on the reinvestment of corporate profits, led to the emergence of a relatively small class of dynamic entrepreneur who owned and controlled a substantial portion of the small industrial sector. The problem was clearly identified during the latter half of the Second Plan period and some remedial actions were initiated. The objective has been to find a pragmatic compromise which would balance the requirements of the development strategy that the private enterprise finds full play for its initiative and dynamism against the risks of too much concentration of economic power in a few hands.

8. To counter-act concentration of economic resources of the country in a few hands and to broaden the ownership of industrial capital with a view to promoting greater social justice, the following specific measures have been taken from time to time :—

(*i*) All public companies are required to offer to the general public at par at least sixty per cent of the issued capital.

(*ii*) In the allotment of shares to the general public, preference is being given to applicants for smaller shares.

(*iii*) The ownership of shares is being progressively broadened through the operations of the National Investment Trust. Trust is given first option to purchase 20 per cent of the share capital offered by a Company.

(*iv*) A Peoples Credit Department has been established in the National Bank of Pakistan to cater to the credit needs of the smaller entrepreneurs.

(*v*) Permission is refused to holders of large industrial undertakings to open financial institutions like banks and insurance companies.

(vi) New taxes, tike Wealth tax, Capital Gains Tax and Gifts Taxes, have been imposed with a view to reducing the concentration of wealth in a few hands.

(vii) The monopoly of licence holders with special has been weakened by the introduction of the import liberalization programme.

(viii) Wherever there is a risk of the emergence of monopoly, units "presence" of the public sector is ensured so as to safeguard the national interest.

The public sector in these cases may be associated with the management or the financing of such enterprises or with both.

(ix) Attempt is being made to encourage new-comers into the field of simple manufacture like textiles, sugar, cement, etc., and to increasingly divert the investments of the established groups to producer goods industries and such industries as require higher outlays, longer gestation periods and advanced technical know-how and managerial skills. To prevent concentration of economic control, such parties as are given permission to manufacture basic raw materials or components are not normally allowed to manufacture semi-finished goods or finished goods which can be produced by smaller units.

9. Another serious problems is that of unemployment. Despite 18 years of accelerated growth, unemployment has tended to increase till the Second Plan period. Even the Second Plan has barely absorbed the additional labour force during the Plan period, without making any impression on the backlog of unemployment. The current estimate of unemployment is 7·5 million man-years, which means that about one-fifth of the active labour force can be regarded as idle. Since these idle man-years are calculated on the basis of partial unemployment, which is fairly widespread, the problem is more serious than these figures suggest. And it has implications both in the economic and social field. Economically, no country having such meagre industrial resources, can hope to develop fast if such a large proportion of its manpower remains untrained and unemployed. Socially, the problem of unemployment further accentuates the problems of income distribution since the best form of social security in a developing economy is to distribute employment widely and at a fast rate.

10. A fast rate of urbanization adds to these problems. According to various estimates, the growth of the urban population has been at the rate of 5 to 6 per cent per annum, creating enormous problems of provision of adequate housing, water supply and sewerage, education, health, transport and other facilities demanded by the urban dwellers. Even the supply and marketing system, particularly of foodgrains and perishable commodities like vegetable, milk, eggs and meat, has not been able to keep up with the fast rate of urbanisation so that the increase in prices has been far more pronounced in the urban areas than the general price index for the entire country.

11. It is quite clear on the eve of the Third Plan that the economy has found some workable solutions to the set of problems which inhibited growth in the early phase of development effort. Evidence of this lies in the dramatic acceleration in growth rate during early sixties, achievement of a backthrough in agriculture and rising level of domestically-financed investment. Less measurable, but more significant is the dynamic response of both rural and urban areas to the changes taking place around them and the emergence of an institutional framework in the country which lends strength and continuity to the process of economic development. This has, however, brought the country abreast with a new set of problems related to a higher stage of development. These are more complex in nature and require much more sophisticated and careful handling in view of their wide ramifications not only for future economic development, but the entire pattern of society we are attempting to evolve. The current debate has centred around the need for blending social justice into the strategy of development which has so far laid emphasis mainly on investment and production. But this is only one aspect of the new changes in emphasis needed. There is need to strengthen growth impulses where these are still weak and to make the process of development much more broad-based than it has so far been. A much more concerted effort is needed to impart skills and to adjust rewards in the light of contributions to enconomic activity. The adjustment in policies in the light of changing economic scene is a continuing phenomenon in a planned economy. It is, however, fruitful at the beginning of a plan period to outline the general directives of economic policies which can best serve the objectives of the Plan. This has been attempted in the following section.

ECONOMIC POLICIES

12. A number of policies have been discussed in various chapters of the Plan. It is not intended to summarise them in this chapter. Only some of the more significant policies are mentioned here. These are intended to signify a general policy framework which is likely to be most conducive to the successful implementation of the Third Plan rather than a specific plan of action which would be evolved in the course of plan implementation in the light of a detailed study of the circumstances prevailing and the experience gained.

Distribution of Income

13. The policy aimed at bringing greater harmony between social and economic goals of the society which was initiated towards the end of the Second Plan period needs to be strengthened further during the Third Plan period. Some broad outlines of possible action are indicated below :—

(*a*) A broad-based ownership of new industrial ventures should receive more positive encouragement of efforts to bring in new comers. The State Bank of Pakistan may further intensify its efforts to ensure that Commercial banks set aside a larger proportion of their advances for the investors of small means. The policy of pursuation followed so far in this direction can be given greater force by directives and can be supported by under-writing the loans made to borrowers with modest means. The PICIC and IDBP should be asked to sanction more loans to industrialists outside the big family groups.

(*b*) Legislative and administrative action may also become necessary to prevent the formation of cartels or the emergence of monopolistic practices. While the existing state of industrial organisation does not point to an urgent necessity for such legislation, with sustained economic growth it would be necessary not before long to have legislative safeguards against monopolistic practices in line with other advanced industrial nations.

(*c*) Firm administrative action is also required in taxation policies since substantial proportion of the vast accumulating income in relative few heads has partly been the by-product of tax evasion.

(*d*) The Government should reserve the right to step into industries in case they are likely to become private monopolies. There should be greater control over such basic utilities as road transport, inland transport, shipping, banks and insurance.

(*e*) A more positive wage policy should be developed which would guarantee an increase in the wage level in line with industrial productivity and introduce minimum social security amenities.

Agricultural Institutional Framework

14. The rapid agricultural growth over the second plan can be traced back to the fact that agriculture has been made an increasingly profitable industry by a realistic agricultural pricing policy ; by the greater availability of water ; by subsidising fertilizers, seeds and other agricultural inputs, by increasing the availability of scarce foreign exchange to the agricultural sector. Thanks to these and other such measures designed to improve the profitability of agriculture, there is no doubt that the farmer today has a greater motivation for increasing his productivity than ever before. This motivation of course will increase in proportion to the share that he gets out of the increase in agricultural production consequent upon his efforts. The Land Reforms introduced in 1959 were aimed at building up this motivation by breaking up large holdings, including landlords to work harder to maintain a reasonable living standard, by distributing land to the landless tenants and by encouraging consolidation of smaller holdings. The favourable climate thus created for agricultural growth would continue to be an important element in improving crop yields during the Third Plan.

15. An important factor in the agricultural field would be the need to maintain a price level at which the farmer gets a reasonable return for his effort. An

agricultural incomes policy would have to be carefully evolved and vigorously implemented, once the transition from a deficit food economy to a surplus food economy begins during the Third Plan period. It is vital that the force of price incentives which has worked automatically during the period of foodgrains deficit is not so whittled down by increased production as to reverse the operation. Similar considerations would apply to cash commodities where world trends are likely to render the task of managing domestic markets much more complex and difficult.

16. Given the incentives and the availability of physical inputs, the farmers would still need financial resources to proceed with the application of more advanced and more expensive methods of cultivation. The system of agricultural credit which has so far touched just the fringe of the problem would have to penetrate deeper into the heart of agricultural economy to finance the full requirements of agricultural growth.

Financial Infra-structure :

17. The last two Plans have witnessed a rapid growth of the financial institutions to meet the requirements of the private sector. Certain imbalances, however, remain. Bulk of the finance has been provided by the commercial banks to the industrial sector which has been used largely by a relatively small number of people. In fact, between one-half to one-third of the increase in bank credit during the Second Plan period went to the industrial sector in addition to the special assistance provided by PICIC and IDBP. On the other hand, mining, transport and housing remained relatively neglected.

18. Primary emphasis in the Third Plan must be placed on expanding the agricultural credit facilities in the country. The Agricultural Development Bank should launch a major programme of branch expansion with the objective of covering each thana/tehsil Council in East and West Pakistan as soon as possible. A major programme of training of bank officers will be necessary to make possible such an expansion of branches in the countryside. Larger resources will also have to be placed at the disposal of the Agricultural Development Bank by the Government and the State Bank, including adequate provision of foreign credits as mentioned earlier.

19. House Building Finance Corporation is the only institution providing credit at present for private construction because commercial banks are not prepared to enter this field due to considerations of liquidity. The operations of this Corporation have remained quite inadequate relative to the magnitude of the task assigned to it. It is important that more funds should be made available in this sector for private construction if the targets of the Third Plan are to be achieved. Savings and Loan Associations have played a significant role in this field in other countries. Efforts should be made to sponsor such Associations in Pakistan with financial assistance from the Government in the initial stages, if necessary,

and within the framework of legal and supervisory control by the Government. An effort should also be made to encourage insurance companies to channel a part of their funds to house building activity, as is the practice in other countries.

20. In the mining sector, Industrial Development was assigned the special task of providing credit facilities. Due to the pre-occupation of the IDPB with industrial lending, the mining sector has remained relatively neglected. It is necessary that special arrangements for financing this sector should be put into practice.

21. The distribution of credit is still concentrated in a relatively few hands. Some attempts were made in the Second Plan to correct this imbalance through persuasion, but the response from the banking system has been far from adequate. The Credit Enquiry Commission made a recommendation in 1960 for setting up a People's Finance Corporation. So far only the National Bank of Pakistan has set up a small loans department. It is necessary that the entire banking system should devote a significant proportion of their resources to the requirments of the small entrepreneur. It may be necessary to evaluate the experience of National Bank in this field and to strengthen the institutional arrangements for credit to the small entrepreneurs in the Third Plan.

22. So far the medium and long-term development financing has been provided in the private sector largely by a specialized financial institutions like IDBP, ADBP and HBFC. There is need to ensure that adequate links are developed between the commercial banking system and the specialized credit institutions so that the vast potential for lending in the commercial banking sector can be drawn upon to meet the growing requirements of development financing. There may also be need for developing adequate institutional framework for meeting the needs of the specialized financing institutions to acquire more resources, for continuing to perform their functions on a growing scale.

23. The Stock Exchange proved an important source of providing equity finance for the Joint Stock Companies during the Second Plan period. After phenomenal growth over a sustained period, activity appeared to be flagging in this vital segment of capital market at the end of the Second Plan. There is an important need to both encourage and regulate activity in the market to ensure broadbased and healthy development of the Stock Exchange. It is suggested that a permanent Stock Exchange Commission be set up to supervise the functioning of the market, to foster healthy practices, and to regulate the pace of floatations made in the Stock Exchange at any particular time.

24. Insurance can make a sizeable contribution to the mobilization of resources for the Third Plan. At present, life insurance in force is only 6 per cent of the national income in Pakistan compared to 150 per cent in the U.S.A. The annual premium income is still only Rs. 140 million even though it has been growing at

a healthy rate of 20 per cent per annum recently. Considerable potential exists in this field which can be exploited through re-organisation of the insurance industry. Recently, a Government appointed Committee has made several proposals for revitalizing insurance in the country including rationalization of life premium rates, improvement of the organisation of the Controller of Insurance, strengthening of the publicity machinery, improvement of the working conditions of the field organization and encouragement life insurance in rural areas. These recommendations will receive serious consideration of the Government during the Third Plan.

Economic Controls

25. Most of the administrative controls have been dismantled in the last five years as part of a long-range policy of de-control recommended in the Second Plan. However, there is still considerable scope for moving from direct to indirect controls and for further rationalization of economic controls, particularly import and investment controls and controls on specific commodities and products. Again, the relaxation of direct controls has not always been accompanied by an adequate framework of indirect controls through fiscal and monetary policy. For this purpose it is necessary to adjust the prices of key unputs, to an increasingly liberalised economy. It should also be appreciated that whereas a liberalised economic system is highly conducive to accelerated capital formation and economic growth, special features would have to be incorporated in the system to implement certain other important policy objectives such as the removal of economic disparity between East and West Pakistan and elimination of the concentration of wealth and economic power.

26. The interest rate structure in the economy continued to be unbalanced despite a strong recommendation made in the Second Plan that it should be adjusted in the wake of dismantling of administrative controls. It is necessary to set the rewards of saving and the cost to users of credit in line with the true economic rate of interest as far as possible. This is necessary to avoid a misallocation of resources. Despite the adjustment in interest rate pattern as a result of the increase in Bank Rate towards the end of the Second Plan period, the return on savings has remained inadequate.

27. Another area of reform is the tariff policy. The average weighted tariff rate at the end of the Second Plan was about 50 per cent on consumer goods, 18 per cent on raw materials and about 10 percent on machinery. These tariff rates protected the developing consumer goods sector while permitting cheaper import of capital goods and raw materials for their installation and operation. The tariff rate structure would have to be modified during the Third Plan in line with the shift in emphasis upon setting up capital goods industries in the country.

28. The operation of the Export Bonus Scheme has been extended up to the end of the Third Plan. Recently, the scheme has been streamlined by establishing

two basic rates of 20 per cent and 30 per cent. It is necessary that basic incentives should be established for export industries to grow up and dispense with a high rate of subsidy.

29. Much has been said about the relative roles of the public and private sectors in various fields. While the issues are complex and do not lend themselves to easy generalisation, the policy of the Government may be summarised as follows :—

(*a*) Pakistan has sought a balanced system of private and public enterprise to secure the advantages of both. The approach has been and will continue to be pragmatic and flexible. For example, during the Third Plan fertilizer industry is being developed by allowing both private and public sectors to compete in this important field of activity.

(*b*) In the directly productive sector of agriculture and industry, primary reliance will continue to be placed on the individual initiative and incentives of the private sector, operating under the disciplines of the market mechanism to ensure efficient use of resources and protection of the consumer, and the public interest. For provision of infra-structure, on the other hand, primary reliance will continue to be placed on the public sector. Elements of both public and private sector will, however, continue in both areas.

(c) The guiding principle for the economy as a whole will continue to be maximum encouragement for private development with the public sector being called upon only where :

(i) monopoly is unavoidable for the efficient provision of essential services ;

(ii) limitation of the size of the market and efficiency of scale of firm permit of only one or a few enterprises and the discipline of competition is not available ;

(iii) the risks are so great, the capital required so large, the technology so difficult that private enterpise is not prepared to undertake essential development.

30. Even in ares in which unhampered private enterprise is not appropriate, there are a variety of means available to the Government to ensure efficient and equitable operations, ranging from regulation of rates and prices of privately operated enterprises, to public private collaboration in management and ownership, to development by autonomous bodies in the semi-public sector. The choice among these must depend on the particulars of each situation. In the past the PIDC have been called upon to undertake essential development which the private sector was not prepared to perform and to divest itself of projects when they became

viable and the private sector was prepared to acquire them. This function will continue, but care will be exercised to ensure that the above policies, which are designed to promote growth while protecting the public interest, are enforced.

31. The operations of public corporations need careful examination, particularly because these corporations are to undertake over 55 per cent of the total investment in the public sector during the Third Plan period. If such a substantial part of the economy is isolated from the need to accumulate capital and if its pricing policy is managed indifferently, without regard to the commercial nature of some of the operations undertaken by these corporations, the task of economic development will become increasingly difficult.

32. The public sector must establish a proper organisation for ensuring the efficiency of such development functions as it undertakes. There is no inherent reason why the public enterprises cannot be efficient if adequate salary scales are established and a corps of managers specially trained to supervise and operate public enterprises is created. The suggested proposal for a special cadre of managerial service within the Government should receive serious consideration in this context.

Price Policy

33. The Third Plan is firmly committed to maintaining reasonable price stability. It is inevitable, however, that prices should increase in the course of economic development ; what is necessary is that cretain essential commodities should be kept relatively protected from such price increases. It is neither necessary nor desirable to establish price controls for this purpose. The strategy of the Third Plan will be to increase the supply of certain essential commodities by setting adequate production targets for them, and to improve the market mechanism so that the flow of commodities from the rural urban areas is smoother and more efficient.

Foreign Assistance

34. Foreign assistance has played a significant role in accelerating investment and growth rates in Pakistan and will continue to do so for some time to come. It is our declared policy that foreign assistance will be phased over the next 2 to 3 Plan periods by which time we should be able to meet our development requirements entirely from our own resources.

35. There has been an increasing trend towards diversification of the sources of foreign assistance which has helped the country to procure its supplies from a wide variety of sources,and, thereby, to overcome some of the adverse implications of "tied" credits. This trend will be intensified in the Third Plan. Efforts will also be made to secure a larger proportion of future loans on softer terms, to reduce

the future burden of servicing of these loans. Also, since the capability of the country to devote its own foreign exchange cash resources to development has increased significantly over the last few years (it will be diverting Rs. 7,000 million to development imports during the Third Plan period) it has become necessary to budget these resources carefully so as to ensure that the projects and programmes not picked up by the aid-giving agencies are financed from the country's own cash resources.

36. Besides the problems discussed above, there are many other policy issues, particularly in the fiscal and monetary fields, which have not been touched upon in this chapter. Some of these issues have already been covered in Chapter 5. It is inevitable that in the course of the Third Plan, many problems will arise almost from day-to-day and require fresh thinking and new solutions. This chapter only provides a frame-work within which these solutions can be found.

CHAPTER IX

REGIONAL DEVELOPMENT

The vast and geographically divided area of Pakistan obviously calls for a regional approach in development planning. Moreover, according to Article 145, clause (3) of the Constitution, a primary object in plan-formation "shall be to ensure that disparities between the Provinces, and between different areas within a Province, in relation to income *per capita* are removed and that the resources of Pakistan (including resources in foreign exchange) are used and allocated in such a manner as to achieve that object in the shortest possible time". The Third Five-Year Plan must, therefore, seek to implement this Constitutional provision to the maximum extent possible.

2. An estimate of the disparity in *per capita* income based on the report of the National Income Commission is presented in Table 1.

TABLE 1

PER CAPITA INCOMES

(GNP AT FACTOR COST OF 1959/60)

	1959-60	1960/61	1961/62	1962/63	1963/64*
East Pakistan	269	278	287	280	305
West Pakistan	355	359	368	382	388
Pakistan	318	325	334	336	353
Extent of Disparity (Pakistan=100)**	28%	26%	25%	31%	24%

* Provisional.

** The Pakistan figures cover 97 per cent of the GNP. The remaining unallocated 3 per cent has been excluded.

Source : Interim Report of the National Income Commission (Karachi, 1964).

This shows that the disparity was 24 per cent in 1963/64.

3. The first significant move in the reduction of disparities was taken by the Second Five-Year Plan. This was achieved by the diversion of an increasing amount of public sector resources to East Pakistan. East Pakistan's share of public sector net resources is estimated to have risen from 36 per cent in 1959/60 to 47 per cent in 1963/64. The gross budgeted allocations for 1964/65 provide East Pakistan for the first time with a margin above West Pakistan, Rs. 2,050 million compared to Rs. 1,950 million. In addition, East Pakistan was allocated Rs. 250 million for the rural works programme as against Rs. 150 million for West Pakistan.

4. Behind the increasing share of total resources lies a story of rapid growth of public development expenditures in East Pakistan, a rate double that in West Pakistan. For 1960-1961 it is estimated that public development expenditures in East Pakistan, including the allocation of Central expenditures, amounted to Rs. 810 million. For 1964-65, these expenditures are projected at nearly Rs. 2,000 million, an increase of nearly 150 per cent. The comparable figures for West Pakistan are Rs. 1,170 million for 1960-61, rising to nearly Rs. 2,000 million in 1964/65, an increase of about 70 per cent.

5. A variety of other measures were also adopted to accelerate the development of East Pakistan. Imports of machinery and spares into East Pakistan are charged duty at the rate of 7·5 per cent, compared to 12·5 per cent for West Pakistan Practically the whole province qualifies for the maximum period of tax-holiday. Imports of cement from West Pakistan have been liberally subsidized. The Presidential Order (Distribution of Revenues and Consolidation and Payment of Loans Order, 1962) placed a larger part of the Central revenues at the disposal of the Provinces. In order to speed up the administrative processes, the railways, WAPDA, PIDC, the Small Scale Industries Corporation and the Forest Development Corporation were bifurcated and made provincial responsibilities.

II. THE TASK DURING THE THIRD PLAN

6. This is good progress. Nevertheless, the task of the Third Plan, as the First Plan prepared under the new Constitution, must be to press forward by seeking out every practicable means of removing disparities as rapidly as possible. A great responsibility rests upon all concerned with framing the Third Plan, to ensure that it faithfully reflects this national objective.

7. The Planning Commission has carefully reviewed the background of economic disparity between the two provinces and explored every possibility of diminishing it. It has come to the conclusion that the only approach to the problem consistent with our national solidarity is to give the provinces large and increasing independence in the execution of their development plans, to assure them increasing participation in the framing of a co-ordinated national Plan and to make clear the firm resolve of all concerned in planning, in the Provinces and at the Centre, not only to remove every restriction that has impeded expansion in East Pakistan, but to take such positive measures as are necessary to facilitate and encourage East Pakistan's growth. In particular, measures must be taken to ensure that East Pakistan receives a steadily rising share of total development resources.

8. The private sector which has so far lagged behind, deserves special mention. In this sector it is proposed that Rs. 22,000 million should be allocated equally to East and West Pakistan. In East Pakistan, this means an increase from an estimated level of Rs. 4,000 million during the Second Plan *i.e.*, an increase of

about 175 per cent. In West Pakistan, it means an increase from an estimated Second Plan total of Rs. 7,500 million, or about 47 per cent. East Pakistan's share of private sector expenditures is planned to rise from an estimated 35 per cent during the Second Plan period to 50 per cent during the Third. West Pakistan's share is due to decrease from 65 per cent during the Second Plan period to 50 per cent during the Third. Given the dynamism of the private sector in West Pakistan, there is every reason to believe that the suggested programme can be mounted effectively. In East Pakistan, every effort will be made to nurture the private sector, but ultimately the result must depend on the energies of the private sector itself.

9. Thus, while it may confidently be predicted that disparities in income can ultimately be eliminated, this is not a realistic goal for the Third Plan or even the Fourth Plan. Given a dedicated effort, it should be feasible, however, to eliminate disparities completely within the period of the Perspective Plan.

10. The Third Plan will take a big step towards accelerating the growth rate in East Pakistan. The Plan projects an increase of 40 per cent in the regional income of East Pakistan and 35 per cent for West Pakistan (compared with actual growth of 30 and 28 per cent respectively in the Second Plan). Physical targets have been set to achieve these rates, and the financial allocations to each sector made corresponding to the physical targets. On this basis, Rs. 27,000 million have been allocated to East Pakistan and Rs. 25,000 million to West. (*see* Table 2.)

11. The proposed acceleration in growth is quite impressive. In terms of annual growth rates it means that the rate in East Pakistan has to be raised from the average of 5.4 per cent in the Second Plan to 7.0 per cent in the Third, and in West Pakistan from 5.0 per cent to approximately 6.1 per cent. The rate proposed for East Pakistan is, no doubt, high but is considered feasible.

Intra-provincial Disparities

12. The constitutional directive quoted above also refers to the removal of disparities in *per capita* incomes within each Province. Studies to determine the extent of these disparities are at present under way, and specific policies will be recommended as soon as the final results of these studies become available. Tentative findings indicate that while the average district *per capita* income* is higher in West Pakistan than in East, the deviations from this average are also much more pronounced in the former. The preliminary results show that 34 out of 51 districts in West Pakistan and 5 out of 17 districts in East Pakistan have *per capita* incomes

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* In these tentative findings "per capita income" is measured as the value added per capita in agriculture and large-scale manufacturing.

TABLE 2

PLAN ALLOCATIONS BY SECTORS AND REGIONS

(Rs. Million)

	EAST PAKISTAN			WEST PAKISTAN			ALL PAKISTAN		
	Public	Private	Total	Public	Private	Total	Public	Private	Total
1. Agriculture	2,385	2,100	4,485	2,285	1,900	4,185	4,670	4,000	8,670
2. Water and Power	3,790	100	3,890	4,610	550	5,160	8,310	650	9,050
3. Industry	3,100	3,800	6,900	1,370	4,500	5,870	4,470	8,300	12,770
4. Fuels and Minerals	360	300	660	330	450	775	690	750	1,440
5. Transport & Communications	3,205	2,100	5,305	3,255	1,800	5,055	6,460	3,900	10,360
6. Physical Planning and Housing	1,585	2,350	3,935	1,440	1,650	3,090	3,025	4,000	7,025
7. Education	1,495	200	1,695	1,235	100	1,335	2,730	300	3,030
8. Health	715	20	735	615	20	635	1,330	40	1,370
9. Manpower	70	10	80	30	10	40	100	20	120
10. Social Welfare	75	20	95	50	20	70	125	40	165
11. Works Programme	1,500	—	1,500	1,000	—	1,000	2,500	—	2,500
	18,280	11,000	29,280	16,220	11,000	27,220	34,500	22,000	56,500
Less: Expected Shortfall	—2,280	—	—2,280	—2,220	—	—2,220	—4,500	—	—4,500
	16,000	11,000	27,000	14,000	11,000	25,000	30,000	22,000	52,000

that are less than the provincial averages. In fact, there are ten districts in West Pakistan which have a lower *per capita* income than the lowest in East Pakistan. Further comments will have to await the completion of these studies.

13. During the Second Plan, attempts were made to break down the Annual Development Programme by districts under regions in order to determine the total government outlay in each region and to allocate more resources to the more backward regions. This policy will be intensified during the Third Plan when, with a vastly increased public sector, the Government will be able to inject much greater sums into the development of these areas. Private efforts, too, will be directed to these areas by means of special tax and other concessions and by more positive control over the location of industry. The Central Statistical Office is now collecting data by districts, so that future planning for intra-regional development can be a continuous process and more securely based on accurate information.

14. Meanwhile, a special Plan has been drawn up for the development of Azad Kashmir and the Northern regions. A total amount of Rs. 240 million has been allocated for the Third Plan. The programme will lay special emphasis on the development of transport and communications in these areas. Stress will also be laid on the expansion of the educational facilities, on the development of food crops and forestry and of industries using wood and wood products. Private participation will be encouraged. The Third Plan will thus see a considerable spurt in the development of these regions.

DEVELOPMENT PROGRAMME FOR EAST PAKISTAN

Agriculture

15. In East Pakistan, the agricultural strategy will be to optimise the use of land. It is estimated that by the end of the Third Plan the projects for irrigation, reclamation and flood control will be ready to serve about 1.8 million acres of new area and 2.7 million acres of the existing cultivated area. The provision of key inputs like plant protection measures, fertilizers, improved seeds and agricultural credit will be stepped up considerably. A problem of particular importance is that animal power is in relatively short supply in East Pakistan and cannot be increased dramatically as the rising pressure of population precludes any large transfers of land from cultivation to pasture. The Third Plan will, therefore, speed up the mechanization of some aspects of East Pakistan's agriculture. The development of inland fisheries and forestry will also be emphasised.

16. Some of the important agricultural targets in this region are to increase the production of food-grains by 2.6 million tons, sugar-cane by 2.2 million tons, jute by 1.8 million bales, tea by 17.5 million lbs. and tobacco by 15 million lbs. In short, the agricultural strategy in East Pakistan is to lay stress on methods of intensive cultivation and to produce significant increases in food crops.

Water and Power

17. The effective use of water raises different types of problems in each region which must be treated separately. Stated simply, the problem in East Pakistan is that there is always either too much water on the land or too little. The rationale of the programme, therefore, must be to concentrate on flood control and drainage in the summer and irrigation by various methods in the winter.

18. The strategy for water resources development is dictated by a number of factors, chief among which are the need to accelerate agricultural growth rates, the limited knowledge of East Pakistan's hydrology, the extremely difficult nature of many of the flood control projects and the limited number of fully engineered projects currently available. There is thus the dilemma of having many projects with long-gestation periods while at the same time requiring projects that can produce economic growth in the short-run.

19. The course chosen has been to proceed as rapidly as possible with the engineering necessary for the regional and project planning of large flood-control projects and to begin several of the more advanced projects, but to rely for Third Plan growth on several short gestation schemes, *e.g.*, the low-lift pump and tubewell schemes. This strategy will meet the long-run objectives as well as add about 0.8 million acres to cropped area by the end of the Third Plan and improve yields on an additional 3.4 million acres through EPWAPDA projects.

20. The programme for power development proposes an almost tripling of East Pakistan's generating capacity. The rationale for this flows from the growth targets set for the Province. The rapid industrialization proposed will exert the first big demand for power. Additional pressures will come from the rapidly increasing urbanisation. It has been found from past experience that the main instrument of rural development in East Pakistan is the distribution of power and the construction of roads. A large programme for rural electrification has, therefore, been proposed. Together with the planned increase in the installation of tubewells, this will give a sizable boost to the rural demand for power.

Industry

21. The industrial strategy for East Pakistan is determined by several factors, chief among which are: the need to accelerate the growth of the GNP, the need to increase export and cut down on imports, and the relative shyness of the private sector to invest in this region. The shape of the final programme reflects the influence of each of these factors.

22. The growth rate of East Pakistan's regional GNP is projected at an average rate of 7 per cent a year. Industry will have to grow very fast in order that the GNP should achieve the planned rate, and those types of industry must be stressed that aid agriculture to reach and maintain the high rate proposed for it

Therefore, the programme in East Pakistan shows a relatively greater emphasis on the faster-growing consumer industries. Thus, for example, for food manufacture East Pakistan is allocated Rs. 486 million to West Pakistan's 300 million, for textiles Rs. 1,477 million to Rs. 1,000 million, for footwear and apparel Rs. 28 million to Rs. 22 million, for wood and cork manufacture Rs. 130 million to Rs. 13 million, for paper and paper products Rs. 534 million to Rs. 100 million. Secondly, fertilizer production will be given a very big boost. By 1970, East Pakistan's production of nitrogenous fertilizers (in terms of ammonium sulphate) will stand at 1,300 thousand tons and of phosphatic fertilizers (in terms of triple super-phosphate) at 350 thousand tons. (The comparable figures for West Pakistan are 1,200 thousand and 200 thousand tons).

23. The policy of increasing manufactured exports leads to a rapid development of the jute industry. The production of hessian/sacking will rise to 800 thousand tons and that of broad-loom products to 120 thousand tons. Import substitution will be effected partly though the expansion of the light industries mentioned earlier but also through the development of steel, petro-chemicals, oil-refining, cement, machine tool and heavy machinery complexes.

24. Finally, the apparent shyness of the private sector requires both the rapid creation of a bigger infra-structure as well as greater Government participation in the industrial programme. Public sector investment in industry has, therefore, been projected at Rs. 3,100 million compared with Rs. 1,370 million in West Pakistan.

Transport and Communications

25. The programme for transport and communications has been based on the requirements of agricultural and industrial programmes, the rate of urbanization and the need for balanced regional development. In East Pakistan, the main emphasis will be on the development of the inland water arteries. An allocation of Rs. 965 million—Rs. 310 million in the public and Rs. 655 million in the private sector—has been made for this purpose. A sizable allocation of Rs. 940 million has been made to the Pakistan Eastern Railways for the rehabilitation and increase of rolling stock and additional track mileage. An allocation of Rs. 1,100 million is made for the construction and improvement of roads. For the development of road transport an allocation of Rs. 650 million is made—Rs. 50 million in the public sector and Rs. 600 million in the private sector. The Plan provides for the improvement of the port of Chittagong and for the conversion of Chalna Anchorage into a permanent major port. Expansion of existing and the construction of new air fields are also projected.

26. It is proposed to instal 60,000 additional telephones and open 1,000 new post offices. A new transmitting station will be set up by Radio Pakistan in Dacca, existing stations will be strengthened and new stations established so that almost the entire population of East Pakistan will be covered by the end of the Third Plan.

Physical Planning and Housing

27. The Plan proposes to build 832,500 new dwelling units in the Province; 1,32,500 for urban and 7,00,000 for rural families. Special incentive will be provided for integrating the private sector more effectively with the public sector programme and co-operative, self-help and mutual aid will be used as the principal instruments for implementing the programme. New institutions like a Housing Corporation (for building and marketing dwelling units), Savings and Loans and Building Societies would also be established. Water supply, sewerage, drainage and garbage disposal projects will be taken up for 25 cities, while 200,000 pumps and tube-wells will be installed in rural areas. It is also expected to cover 12,000 villages by a comprehensive programme for rural sanitation. Provision is also made for financial and technical assistance to local bodies such as Investment Trusts, Development Authorities and Municipalities for their physical planning and housing problems and projects which cannot be financed on a commercial basis.

28. The Basic Development Programme in East Pakistan will create a number of new institutions and initiate several new projects. With the assistance of U.N. Special Fund, a comprehensive project for guiding the physical development of the whole province will be launched. The project would continue for 4.5 years and will lay special emphasis on urban development, dealing with planning and development of new urban centres which will emerge as a result of the accelerated programme of economic development. As regards existing urban and rural centres, twenty Outline Plans, ten Urban Development Plans and three Regional Development Plans will be prepared. It is also expected that province-wise plans for urban and rural water supply, sewerage, drainage and sanitation would be completed. An independent Department of Physical Planning and Housing will be established at Dacca, and the present modest efforts for building research will be developed into a Building and Housing Research Centre. In order to meet the urgent needs of trained manpower, four building trade schools, and an Institute for Physical Planning will be established. The present programme of architectural education at the Technical University would be further expanded and appropriate programme for post-graduate education in city and regional planning initiated. Two special institutes-*cum*-laboratories for research and training in public health engineering and environmental sanitation will also be established at appropriate locations. A special feature of the programme is planning and development of three new towns and 6,000 new villages.

Education

29. The East Pakistan educational system enrols a bigger proportion of the primary school age-group and a lower proportion of the secondary and higher education age-groups than happens in West Pakistan. The education strategy for

the Third Plan is devised to correct this imbalance. At the primary level, the strategy will be to maintain enrolment in class I at about 85 per cent of the relevant age-group and to lay the main emphasis on reducing the drop-out rate. As a result of this, it is expected that 7.20 million children will be enrolled at the primary stage by 1970.

30. The secondary stage will, because of the imbalance mentioned earlier, be emphasised more than in West Pakistan. The Plan proposes an additional enrolment of 400,000 children, raising the total number of children at the lower secondary stage to 800,000 by 1970. Curricula reforms will be effected, more emphasis being placed on science and craft subjects.

31. Technical education will receive a boost. The Engineering University at Dacca will be strengthened, the engineering colleges at Rajshahi and Chittagong completed and an engineering college established at Khulna. The annual intake capacity of the engineering institutions will be increased from 480 in 1965 to 1,500 in 1970. Facilities at the diploma level will also be increased. The 13 existing technical institutions will be expanded into polytechnics, two new polytechnics and three monotechnic institutions will be established. The annual admission into polytechnics will rise from 1,900 in 1965 to 7,000 by 1970.

32. Higher education facilities will be expanded. The main emphasis will be on the improvement of quality and increasing the availability of places for scientific subjects. Three new universities will be started.

33. The foregoing education programme will make considerable demands on the teacher-training capacity of the system. In this field, too, much stress will be laid on the improvement of quality, more scientific methods of teaching, and on the training of larger numbers of teachers of subjects connected with the sciences and the industrial arts.

Manpower Training and Labour

34. The aim of the Third Plan is to create 3 million new jobs in East Pakistan so as to absorb the increase of 2.6 million persons in the labour force estimated for the period 1965-70, and to reduce the back-log of unemployment and under-employment by 0.4 million. The main emphasis of the programme will be on the improvement of skills. For this purpose, a large number of training centres will be established. The existing facilities for public assistance in finding employment and in solving problems related to occupational choice will be augmented by increasing the number of employment exchanges from 5 to 17 and by setting up 4 university placement bureaus. The programmes of workers' education will be reoriented so as to aim at productivity improvement. One institute will be established to provide training in industrial safety and occupational health. A social security programme for the provision of insurance against employment injury,

maternity and sickness, will be set up. The other programmes will aim at protection and regulation of workers' wages and earnings so as to accomplish a reasonable rise in wages consistent with gains in labour productivity, and setting up of special housing corporations for industrial workers.

Health

35. The Plan reflects an emphasis on three points: preventive programmes are given higher priority than curative; the building up of a strong medical infra-structure is stressed, and a considerable programme for the training of personnel to man these institutions is envisaged. The largest allocation has been made for the malaria eradication programme. By the end of the Third Plan period, the programme will have covered the entire Province and malaria will have been eradicated from almost 34 million of the population. 260 rural health centres will be established during this period. The functions of the centres have been extended to include tuberculosis control and school health. The total number of hospital beds will increase from 9,200 in 1,065 to 17,000 in 1970. The beds will be largely concentrated at the Saddar and Sub-divisional levels so as to provide a proper referral system from the rural health centre upwards. East Pakistan has a large training programme in order to meet the manpower requirements. All the existing medical colleges will be improved and strengthened during the Third Plan period and work for starting two new medical colleges at Barisal and Rangpur will be taken up. The number of doctors is expected to increase from 6,700 to 7,800. The existing institutions for training of lady health visitors will be improved and two new training centres established. Six new schools for nurses will be established so that each medical college will have a nurses' training school attached to it. A school of Tropical Medicines and Public Health is also being established to provide post-graduate training as well as to conduct research.

Family Planning

36. A comprehensive programme for family planning has been prepared and will be launched in all the districts of East Pakistan during the Third Plan period. Flexibility of approach, monetary incentives and adequate supply of medical personnel are the key-notes of the programme. The village 'dai' (30,000 in all at the rate of 1 for 2 villages) has been chosen as the principal worker since she has the confidence of the people, especially of women of child-bearing ages. Progress will be evaluated continuously and changes incorporated wherever necessary. The programme is backed by adequate organisational structure and will be supervised by the Family Planning Commissioner.

Social Welfare

37. The East Pakistan programme does not differ materially from that in West Pakistan except in two respects: first, since East Pakistan is relatively less urbanized, much more stress is laid on providing social services in the rural areas; secondly, a larger allocation is made for the strengthening of the administrative frame-work.

DEVELOPMENT PROGRAMME FOR WEST PAKISTAN

Agriculture

38. The strategy for the agricultural sector in West Pakistan will be to optimise the use of water. It is expected that by the end of the Third Plan the projects for irrigation, reclamation and flood control will serve 2.3 million acres (net) of new area and 17.1 million acres (net) of the existing cultivated area in West Pakistan. Some major increases in production are: 2.1 million tons of food-grains, 5.4 million tons of sugarcane, 1.3 million bales of cotton and 25 million lbs. of tobacco. Plant protection measures, mechanised farming, and the extensive use of improved seeds will be contributory measures in the raising of output. The biggest factors, however, will be the provision of water and fertilizer on a massive scale. In order to achieve this the domestic manufacture of fertilizers will be sharply stepped up and, if required, imports will be liberalised. At the same time steps will be taken to accelerate the momentum of private tube-well installation. Thus it will be seen that the broad strategy for the agricultural sector in West Pakistan is to lay more stress (relatively to East Pakistan) on extensive methods of cultivation for the production, very largely, of cash crops. The increase in agricultural output in this region over the Third Plan is projected at about 30 per cent, giving an annual growth-rate of 5.5 per cent.

Water and Power

39. In West Pakistan there is seldom enough water and the thin spreading of water on flat alluvial lands with poor natural drainage has added to the problems of salinity, alkalinity and waterlogging. The effective use of water, therefore, calls for a programme of storage, massive ground water irrigation, and the treatment of waterlogging and salinity.

40. The strategy adopted has been dictated by two opposing factors: (a) the need to accelerate agricultural growth rates, which in this context means the need to develop water resources as rapidly as possible; and (b) the incomplete knowledge regarding the hydrology of the Indus Basin. In other words, Pakistan cannot afford to wait until a fully articulated Master Plan is developed before proceeding with any projects. On the other hand, it cannot afford to jeopardise the effective use of the total water supply in a way which helps one area only at the expense of another. Under these circumstances the logical course is: (a) to proceed as rapidly as possible with the development of areas, especially the non-saline groundwater areas which can be developed economically, which have short gestation periods, and which do not jeopardise the development of the Basin as a whole; and (b) to press as rapidly as possible the engineering attack on the more difficult areas.

41. The objective of the Third Plan are, thus, to maximise the relatively easy development of sweet ground water in the Province through an expanded and integrated public and private tube-well programme, to begin work on canal modi-

fication schemes that will allow a greater proportion of the river flow to be utilised, and to increase the engineering and water planning efforts required to provide an adequate technical and economic base for later surface water and saline ground water development. As a result of these measures the area irrigated will increase by almost 4 million acres and the area improved by over 17 million acres. (The corresponding figures for the Second Plan are 1.83 and 6.30 million acres).

42. The increase in power generating capacity is directly related to the demand for power. West Pakistan's demand will be derived mainly from the rate of industrialisation forecast, the programme for rural electrification and the number of additional tube-wells to be installed. A sizable back-log of unsatisfied demand also has to be made up. The power development programme reflects these objectives and proposes an increase of over 80 per cent in installed generating capacity over the Third Plan.

Industry

43. The industrial strategy has largely been determined by three factors: the need to increase exports and save on imports, the need to maintain high rates of saving and to prevent unplanned increases in consumption; and the need to maximise the use of Pakistan's natural resources. The programme for West Pakistan is drawn up to reflect these objectives.

44. In general, the foregoing criteria dictate that heavy industry be given far more emphasis than in previous Plans and that increases in the consumer industries be limited to the increase in consumption permitted by the Plan. In some cases, expansion of capacity beyond this point has been proposed, but the definite intention is that the excess will be diverted to exports. For example, the Plan projects an increase of 12.5 per cent in the per capita consumption of cloth but permits an increase of almost 29 per cent in capacity (from 2.1 to 2.7 million spindles). It is clearly understood that the bulk of this additional capacity will be devoted to exports.

45. On the whole, however, the strategy has been to lay particular stress on heavy industry both in order to attain a higher rate of savings and for Balance of Payments reasons. Thus, the Third Plan will see a considerable increase in the manufacture of steel, fertilizers, machine tools, cement, heavy engineering products and oil refining.

46. Finally, those industries and methods of production are being encouraged which make use of West Pakistan's natural resources. The biggest fertilizer plant, for example, will be based on gas from the Mari field; the petro-chemical plants will use a mixture of natural gas and domestically produced refinery products.

47. It is to be expected therefore that the most significant increases in production will occur in the heavy industries and in those based on natural gas. Thus the manufacture of cement will go up from 2.1 million tons in 1965 to 4 million tons

in 1970, steel ingots from 10.5 thousand tons to 900 thousand tons, nitrogenous fertilizers (in terms of ammonium sulphate) from 295 thousand to 1.2 million tons, phosphatic fertilizers (in terms of triple super-phosphate) from 7,000 tons to 200,000 tons.

Transport and Communications

48. As in the case of East Pakistan, the programme for West Pakistan has been drawn up with an eye to the requirements of the Third Plan's agricultural and industrial programmes and the rate of urbanization. The main emphasis will be laid on the road programme (both super-highways and feeder roads) which will receive an allocation of Rs. 890 million. An allocation of Rs. 1,370 million has been made for Pakistan Western Railway for rehabilitation and additions to rolling stock, strengthening of tracks, bridges, plant and machinery, construction of new railway lines, structural and engineering works and the modernisation of workshops. An allocation of Rs. 935 million is made for the development of road transport in the private sector. The Plan provides for the improvement and expansion of the Port of Karachi. A number of airfields will be established, existing ones enlarged, and a large number of new air services will be introduced. Adequate hotel accommodation and transportation will be provided in areas of tourist interest. The installation of 90,000 additional telephones and the opening of 1,000 new post offices is proposed. The expansion of the broadcasting services will result in a coverage of about 65 per cent of the area and 85 per cent of the population of West Pakistan.

Physical Planning and Housing

49. The organization for Physical Planning and Housing will be strengthened and improved. The present programme for architectural and town planning education at Lahore will be further expanded. Technical and financial assistance will be provided to Improvement Trusts, Development Authorities and Municipalities. The present provision for financial assistance to Local Bodies is modest and is essentially meant for financing those schemes and projects which cannot be taken up on a commercial basis. An important feature of the programme is the physical planning approach which conceives the planning of the total environment in order to meet effectively the urgent pressing needs of the urban and rural communities and to prevent future dislocations and problems.

Education

50. The broad strategy for education in West Pakistan calls for expansion of the primary base, extension of the technical education facilities and consolidation and improvement of quality at the higher levels.

51. Expansion at the primary stage will be effected both by reducing the drop-out and by increasing enrolment in class I to 75 per cent of the appropriate age-group. It is intended to raise the number of children at the primary stage from 3.10 in 1965 to 5.90 million in 1970.

52. The main emphasis of the secondary school programme will be on increasing the facilities for the study of science and the industrial arts. Craft courses will be made compulsory at the lower secondary level. The Plan envisages the enrolment of 1.20 million children at this stage by 1970.

53. Technical education will be given very high priority. The Engineering University at Lahore will be developed for promotion of post-graduate studies and research. The engineering colleges at Karachi and Peshawar will be strengthened, that at Hyderabad completed, and another one established. The annual intake capacity of the engineering institutes will be increased from 1,150 in 1965 to 1,800 in 1970. Facilities for the training of technicians will be strengthened. The on-going projects for 8 polytechnics will be completed, 13 new polytechnics and one new monotechnic established. The intake of these institutions will increase from 2,200 in 1965 to 7,000 in 1970.

54. Consolidation and improvement of quality will be the keynote at the college and university education. The ratio of scientists to arts students will be increased and better library and laboratory facilities provided. A new university will be established at Islamabad.

55. Teacher-training programmes will be expanded. Here again, emphasis on quality will predominate. Special in-service training courses will be provided for primary and lower secondary teachers in order to expose them to better methods of training. Greater opportunities for research and foreign training will be offered to College and University teachers.

Manpower Training and Labour

56. The aim of the Third Plan is to create 2.5 million new jobs in West Pakistan so as to absorb an estimated increase of 1.6 million persons in the labour force for the period 1965-70, and to reduce the back-log of unemployment and underemployment by 0.9 million. Several training centres will be established, for the main emphasis of the Plan is on the improvement of skills and productivity. The number of employment exchanges will be increased from 15 to 20 and 6 university placement bureaus will be set up. The programme of workers' education will be reoriented so as to concentrate on productivity improvement. A new institute will provide training in programmes of industrial safety and occupational health. A programme for the provision of insurance in case of injury, maternity and sickness will be set up. The other programmes will aim at the protection and regulation of workers wages and earnings so as to accomplish a reasonable rise in wages consistent with the gain in labour productivity and the setting up of special housing corporations for industrial workers.

Health

57. The Plan lays particular emphasis on preventive schemes and the training of medical personnel. The largest programme under the health sector is malaria eradication. By the end of the Third Plan period it is expected that almost 35 million people will be free of the disease and for another 5 million the parasitic index will have declined to less than 1 per cent. For the control of tuberculosis the B.C.G. campaign will continue, 96 clinics will be established to provide ambulatory treatment and an additional 500 beds will be added. The rural health centre programme will be expanded during the Third Plan period, 200 new health centres will be built and 200 existing dispensaries upgraded to function as rural health centres. Hospital beds will be increased from 23,800 to 28,800. Priority will be given to hospitals at Tehsil and District levels. The Post-Graduate Medical Centre at Karachi will be expanded and all the medical colleges further improved. The existing school for lady health visitors will also be expanded to accommodate nursing students. Two new training centres for health assistance will be started. The number of doctors is expected to increase from 8,900 to 12,000.

Social Welfare

58. Pakistan does not have sufficient resources to extend the full range of welfare facilities that are available in advanced countries. The sectoral programme, therefore, will have to concentrate on strategic areas of special importance. In West Pakistan these have been identified primarily as being problems of adolescence and those due to rapid urbanisation. The Plan, therefore, focuses mainly on these problems from a variety of angles, such as by providing special services for children and youths and by setting up model institutions for the physically and socially handicapped.

Family Planning

59. The West Pakistan programme is conceived on similar lines as that in East Pakistan and will be launched in 36 districts during the Third Plan period. The cost of the programme is slightly lower than that in East Pakistan.

ANNEXURE TABLES

TABLE I

ADDITIONAL EMPLOYMENT BY REGIONS, 1965-70

(Thousand man-years)

	East Pakistan	West Pakistan	Total
1. Agriculture	1,360	1,140	2,500
2. Manufacturing	490	460	950
(a) Large-scale	(297)	(267)	(564)
(b) Small-scale	(193)	(193)	(386)
3. Construction	370	280	650
4. Trade and Services	750	650	1,400
Total:	2,970	2,530	5,500

TABLE II

REGIONAL BREAKDOWN OF THE EXPORT TARGETS FOR THE THIRD FIVE-YEAR PLAN

(Rs. million)

	1964-65 (Estimate)			1969-70 (Targets)		
	Total	West Pak.	East Pak.	Total	West Pak.	East Pak.
A. PRIMARY COMMODITIES						
1. Raw jute	820	—	820	750	—	750
2. Raw cotton	320	316	4	550	540	10
3. Hides and skins	70	34	36	80	38	42
4. Raw wool	90	90	—	90	90	—
5. Rice	145	145	—	250	250	—
6. Fish (fresh)	45	12	33	100	35	65
7. Other primary commodities	140	110	30	230	160	70
Total: 'A'	1,630	707	923	2,050	1,113	937
B. MANUFACTURED PRODUCTS						
8. Jute manufactures	350	—	350	800	—	800
9. Cotton manufactures	180	180	—	350	350	—
10. Fish (processed)	50	13	37	150	52	98
11. Paper and newsprint	20	2	18	50	5	45
12. Other manufactures	270	202	68	650	520	130
Total: 'B'	870	397	473	2,000	927	1,073
C. INVISIBLE EARNINGS	550	330	220	750	450	300
Total earnings:	3,050	1,434	1,616	4,800	2,490	2,310

TABLE III

TARGETS OF CROP PRODUCTION FOR THE THIRD PLAN

Crop	1964-65			1969-70			Percentage increase		
	East Pak.	West Pak.	Total	East Pak.	West Pak.	Total	East Pak.	West Pak.	Total
1	2	3	4	5	6	7	8	9	10
				Thousand tons					
Rice	10,200	1,200	11,400	12,725	1,720	14,445	25	43	27
Wheat	37	4,120	4,157	64	5,400	5,464	73	31	31
Maize	5	500	505	16	770	786	220	54	56
Other foodgrains	18	720	738	20	750	770	11	4	4
	10,260	6,540	16,800	12,825	8,640	11,465	25	32	28
Gram	34	616	650	38	700	738	12	14	13
Pulses	190	170	360	275	220	495	45	29	38
Sugarcane	4,900	15,850	20,750	7,050	21,250	28,300	44	34	36
Cotton seed	6	770	776	7	1,230	1,237	16	59	59
Other oil seeds	156	245	401	270	320	590	73	31	47
Fruits	14,000	750	2,150	1,760	950	2,710	26	26	26
Vegetables	1,250	1,050	2,300	1,625	1,480	3,105	30	41	35
				Thousand bales					
Jute	6,200	—	6,200	8,000	—	8,000	29	—	29
Cotton	17	2,200	2,217	20	3,500	3,520	18	59	59
				Million lbs					
Tea	56.0	—	56.0	73.5	—	73.5	31	—	31
Tobacco	63.0	170.0	233.0	78.0	195.0	273.0	24	15	17

TABLE IV

PHYSICAL TARGETS OF THE THIRD FIVE-YEAR PLAN

(WATER & POWER)

ITEMS	Unit	Bench-mark production in 1964-65			Third Plan Target in 1969-70			Percentage increase		
		East Pak.	West Pak.	Total	East Pak.	West Pak.	Total	East Pak.	West Pak.	Total
1	2	3	4	5	6	7	8	9	10	11
WATER*										
Area irrigated during preceding 5 years	Million acres	0.22	1.83	2.05	1.76	3.98	5.74	709	117	181
Area improved during preceding 5 years	„	2.45	6.30	8.75	2.72	17.61	20.33	10	180	132
POWER										
Installed electrical capacity	1000 MW	0.30	1.13	1.43	0.83	2.06	2.89	177	82	102

*Increase during Second and Third Plans.

TABLE V

PHYSICAL TARGETS FOR THE THIRD PLAN

(INDUSTRY)

ITEM	Unit	1964-65			1969-70			Percentage increase		
		East Pak.	West Pak.	All Pak.	East Pak.	West Pak.	All Pak.	East Pak.	West Pak.	All Pak.
1. Jute manufactures	Thousand tons	331	Nil	331	768	32	800	132	—	142
2. Cement	"	70	1,930	2,000	2,000	4,000	6,000	2,757	107	200
3. Steel ingots	"	Neg	Neg	Neg	300	900	1,200	—	—	—
4. Writing and printing paper	"	33	14	47	65	35	100	97	150	113
5. Board	"	5	22	27	30	70	100	500	218	270
6. Newsprint and mechanical paper	"	40	Nil	40	65	35	100	63	—	150
7. White sugar	"	87	225	312	230	410	640	164	82	105
8. Nitrogenous fertilizers in terms of ammonium sulphate	"	250	300	550	1,300	1,200	2,500	420	300	355
9. Phosphatic fertilizers in terms of triple superphosphate	"	Nil	7	7	350	200	550	—	2,757	7,757
10. Cigarettes	Million	5,000	13,500	18,500	11,500	18,500	30,000	130	37	62

TABLE VI

PHYSICAL TARGETS OF THE THIRD FIVE-YEAR PLAN

(TRANSPORT & COMMUNICATIONS)

ITEMS	Unit	Bench-marks production in 1964-65			Third Plan Target in 1969-70			Percentage Increase		
		East Pak.	West Pak.	Total	East Pak.	West Pak.	Total	East Pak.	West Pak.	Total
Railways										
Locomotives (Steam)	Number	350	695	1,045	290	590	880	—17	—15	—16
Locomotives (Diesel/Electric)	,,	102	316	418	184	454	638	77	44	53
Passenger Carriages	,,	1,300	2,161	3,461	1,500	2,372	3,872	15	10	12
Other Coaching Vehicles	,,	636	1,265	1,901	696	1,353	2,049	9	7	8
Wagons	,,	19,454	37,333	56,787	21,500	40,766	62,267	11	9	10
High-type Roads	Miles	1,900	11,400	13,300	2,950	12,750	15,700	55	12	18
Road Transport	Number									
Buses	,,	3,200	14,000	17,200	5,800	18,150	23,950	81	30	39
Trucks	,,	7,900	27,000	34,900	15,200	33,300	48,500	92	23	39
Telegraphs & Telephones	Thousand Number									
Telephones	,,	30	105	135	90	195	285	200	86	111
Post Offices	Number	5,200	6,600	11,800	6,200	7,600	13,800	19	15	17

TABLE VII

PHYSICAL TARGETS OF THE THIRD FIVE-YEAR PLAN

(EDUCATION AND TRAINING)

TEMS	Unit	Bench-mark production in 1964-65			Third Plan Target in 1969-70			Percentage increase		
		East Pak.	West Pak.	Total	East Pak.	West Pak.	Total	East Pak.	West Pak.	Total
1	2	3	4	5	6	7	8	9	10	11
Primary Schools	Number	27,000	35,000	62,000	31,000	77,500	108,000	15	121	75
Children at Primary Stage	Million	4.20	3.10	7.30	7.20	5.90	13.10	71	90	79
Annual Production of Primary Teachers	Number	8,600	10,400	19,000	20,000	20,000	40,000	133	92	111
Children at Lower Secondary Stage	Million	0.40	0.64	1.04	0.80	1.20	2.00	100	88	92
Annual admission into Vocational Courses	Number	3,300	5,000	8,300	25,000	25,000	50,000	558	400	502
Annual admission into Polytechnics (Technicians)	,,	1,900	2,200	4,100	7,000	17,000	14 000	268	218	241
Annual admission into Engineering Colleges and Universities	,,	480	1,150	1,630	1,500	1,800	3,300	213	57	102
Engineering Colleges and Universities	,,	2	5	7	4	6	10	100	20	43

TABLE VIII

PHYSICAL TARGETS OF THE THIRD FIVE-YEAR PLAN

(HEALTH)

	1964-65			1969-70			Percentage Increase		
	East Pakistan	West Pakistan	Total	East Pakistan	West Pakistan	Total	East Pakistan	West Pakistan	Total
Doctors	6,700	8,900	15,600	7,800	12,000	19,800	16	35	27
Nurses	550	3,050	3,600	1,100	4,300	5,400	100	41	50
Lady Health Visitors	147	900	1,047	850	1,900	2,750	480	111	163
Hospital Beds	9,200	26,300	35,500	17,000	31,300	48,300	85	19	36
T. B. Clinics	44	52	96	54	127	181	23	144	89
Rural Health Centres	100	100	200	360	500	860	260	400	330
L. H. V. Training Centres	3	5	8	5	5	10	67	—	25
Nurses Training Centres	4	14	18	10	14	24	150	—	33
Medical Colleges	6	6	12	8	6	14	33	—	17

CHAPTER X

EMPLOYMENT AND WAGE POLICY

The gravest problem confronting Pakistan is unemployment. Almost one-fifth of the available manpower, the country's most valuable resource, is wasted every year for lack of opportunities for useful work. In actual numbers, about half the labour force is affected, as unemployment in Pakistan generally takes the form of an under-utilization of at least half of the available manpower.

2. In the rural areas nearly the entire labour force is idle during that part of the year in which no crops are grown. In urban areas regular unemployment is an ever present threat to the worker and his family, and innumerable man-years are lost as many employ themselves in 'escape-jobs' like local transport, retail hawking and other services, forcing productivity down to levels which hardly allow subsistence earnings. The continuing influx of labour into town and cities makes it difficult to improve this situation.

3. In previous Plans the need to provide for substantial increases of employment opportunities was fully recognized. However, the Plans were not formulated on the basis of specific targets for the use of available manpower. To some extent lack of statistical information hampered progress in this direction. Primarily, however, it was always realized that it is almost impossible to allocate resources on the basis of labour-intensity of projects, or to deviate from usual production techniques. Only a few nations have been able, through long and arduous research, to develop production techniques adjusted to relative factor prices. Pakistan is not yet at the stage where domestically developed production techniques will have a substantial impact on the relative uses of labour and capital. This would also require greater efforts in training the labour force, together with more sophisticated management and organizational ability at the plant level.

4. Thus the employment effects of the economic growth generated through the successive Plans were more a by-product than a target. The same applies, to a degree, to the Third Plan. In all these cases employment effects were assessed after the Plan was made. For the first time in the Second Plan, however, this estimate was compared with the growth of the labour force and a Works Programme was inaugurated specifically to meet the employment problem. This again is being done in the preparation of the Third Plan, and the Works Programme is being increased substantially.

5. The success of the Second Plan was that for the first time the economy grew fast enough to absorb all the additions to the labour force. Thus it was possible to hold the line on unemployment. In a large measure, this resulted from

the acceleration in agricultural growth rates which jumped from the 1.3 per cent annual average of the pre-1960 decade to 3.5 per cent during the Second Plan. In fact, the consequent increase in agricultural employment during the last five years has been larger than over the preceding ten. The major factors behind this development were the extension of the cultivated area and an increase in intensity of cultivation.

6. Another powerful factor in the rise in employment was the Rural Works Programme. Initiated in the fiscal year 1961-62, its allocation increased from Rs. 100 million in the first year to Rs. 400 million in 1964-65. In this short period it has so grown in strength and scope that in 1964-65 it is likely to provide a very significant amount of additional employment. Its actual impact in alleviating poverty and insecurity is even greater as the programme reaches its peak in the winter months—normally a period of enforced inactivity in rural areas. An important aspect of this programme is that it does not consist of "make-work" schemes. Rather, it is a programme to create rural capital by labour intensive methods. This improved and enlarged stock of capital provides a basis for *permanently* increased employment. The Third Plan places great emphasis on the role of the Works Programme by raising its allocation to Rs. 2,500 million. In addition it is recommended that the Provincial Governments divert resources from the provincial programme to permit execution of such programmes by labour intensive methods through the Basic Democracies. Resources devoted to the Works Programme should at least double over the next five years. Furthermore, by providing the programme with technical expertise, it is contemplated that larger and more sophisticated tasks can be undertaken by the Basic Democracies. The Plan also calls for the extension of the Works Programme to urban areas, where it will simultaneously deal with both urban unemployment and the shortage of urban housing. This is discussed in more detail in another chapter.

7. The rapid progress in employment has moved it from the periphery to the centre of concern with development. It is now realistic to project with some optimism the attainment of full-employment by the middle of the Perspective Plan. The employment strategy for the Third Plan has been drawn up to take the first big stride on the road to this goal.

8. The Third Plan projects additional employment over the next five years at 5.5 million man-years. This will not only absorb all the new entrants into the labour force, estimated at 4.2 million, but for the first time also cut sharply into the legacy of unemployment from earlier periods. This estimate of employment is, in fact, conservative as it is based on a cautious projection of its most important component — agricultural employment. Table 1 shows the details for the period 1950-70.

TABLE 1

LABOUR FORCE AND EMPLOYMENT: 1950-70

(mln. man years)

	1950-51	1954-55	1960-61	1964-65	1969-70
Employment in :					
Agriculture ...	16.25	16.90	17.85	19.30	21.80
Other	5.45	6.65	8.30	10.40	13.40
Total employment ...	21.70	23.55	26.15	29.70	35.20
Man-year equivalent of partial unemployment ...	5.60	6.55	7.55	7.55	6.25
Labour Force ...	27.30	30.10	33.70	37.25	41.45
Unemployment as % of Labour Force ...	20.5	21.8	22.4	20.3	15.1

9. The increase in agricultural employment is projected at 2.5 million man-years, 1.36 in East and 1.14 in West Pakistan. The increased labour requirements are caused by additions to the cultivated area, an increase in the intensity of cultivation in order to raise yields per acre, and by a higher demand for livestock products during the Third Plan period. The rationale for this is briefly discussed below.

10. In East Pakistan it is proposed to add about 2.1 million cropped acres during the Third Plan. This represents an increase of about 9 per cent in the cultivated area, and will call for an increase in labour requirements estimated at 0.44 million man-years. In West Pakistan it is expected that an additional 3.7 million acres will be taken under the plough by 1970. This should increase employment opportunities by about 0.56 million man-years. (Agriculture is much more labour-intensive in East than in West Pakistan.)

11. A major contribution to the rise in agricultural output will be increasing productivity per acre. A large measure of the improvement in productivity will be due to the greater use of agricultural inputs, but a part will flow from an increased use of labour. The employment projections are based on the assumption that only 35 per cent of increased production will require additional inputs of labour — the other 65 per cent will result from increases in labour productivity. On this basis an addition of 0.43 million man-years can be projected in West Pakistan. An addition of 0.80 million additional man-years is estimated for East Pakistan, where changes in rice technology require substantial increases in labour.

12. The other major demand for agricultural labour comes from the livestock programme. It is estimated that on an annual basis farmers devote about 20 per cent of their time to livestock in West Pakistan and 15 per cent in East Pakistan.

Given an increase of 15 per cent in livestock numbers over the next five years, estimated on the basis of recent trends in the demand for and prices of meat and dairy products, this would provide another 0.27 million man-years of additional employment.

13. The break-down of additional agricultural employment is summarized in Table 2.

TABLE 2

ADDITIONAL AGRICULTURAL EMPLOYMENT, SECOND AND THIRD PLAN PERIODS

(in million man-years)

	Second Plan			Third Plan		
	East Pakistan	West Pakistan	Total	East Pakistan	West Pakistan	Total
Labour for:						
Additional Area ..	0.25	0.23	0.48	0.44	0.56	1.00
Yield Improvement ..	0.60	0.40	1.00	0.80	0.43	1.23
Livestock increase ..	0.10	0.12	0.22	0.12	0.15	0.27
	0.95	0.75	1.70	1.36	1.14	2.50

14. The increase in non-agricultural employment shown in Table 1 was estimated on the basis of the observed relation between increases of output and labour productivity on the census data of 1951 and 1961, by sectors of the economy. Against an increase of about 25 per cent over the Second Plan, this suggests again an increase of 27 per cent over the next five years. In addition, in the Third Plan total expenditures under the Works Programme are expected to increase from Rs. 400 million to at least Rs. 800 million by 1969-70, providing again 400,000 additional man-years of employment. Further allocations may be provided if resources become available and if the Basic Democracies continue to show the same heartening improvement in administrative capacity as during the Second Plan. It is also proposed to add a substantial urban element to the programme which has so far been rural oriented. This is discussed below.

15. The past 15 years have witnessed both an increase in capital per worker and an increase in the productivity of labour. The amount of investment per additional unit of labour rose from an estimated Rs. 3,650 in the early fifties to about Rs. 5,250 in the Second Plan, an increase of about 40 per cent in ten years time. For the Third Plan the ratio is estimated to rise to Rs. 8,580. This development is, of course, inevitable in view of the structural changes taking place in the economy,

the increase in investment being concentrated on building up the infra-structure and in large scale manufactures. The ratio of investment to additional employment can be expected to increase in the future as infra-structure investment is stepped up in East Pakistan and the composition of the industrial programme shifts towards a larger share for heavy industry complexes. (Already the investment requirements per worker in large-scale manufacturing are estimated at Rs. 20,000.) Thus, it follows that the full-employment target can only be achieved within the constraint set by the available resources, if the industrial employment Plan is carefully balanced by a programme which will provide a significant amount of employment at a much lower cost. Such a role is played by the Works Programme which is considered in a little more detail later and is also the subject of a separate chapter.

16. The productivity of agricultural labour has grown steadily over the last 15 years. There was a significant acceleration during the Second Plan period — the rate of growth of productivity actually doubled — as inputs of fertilizer and water and the dissemination of better techniques were sharply stepped up. The productivity of non-agricultural labour also improved over the entire 15 years period, and showed its most substantial gains during the Second Plan. This can be attributed both to an increase in the tempo of investment as well as the adoption of a more liberal import policy which enabled many industries to operate at fuller capacity. The increase in productivity was undoubtedly a major factor in maintaining the stability of prices during the Second Plan.

17. The employment and production estimates for the Third Plan implicitly contain a projection for the growth in labour productivity. In the agricultural sector the increase has been reckoned at approximately 2.5 per cent per year against a projected increase of 2.6 per cent per year in the non-agricultural sector. In both sectors, therefore, a significant acceleration in the rate of growth of labour productivity over the Second Plan level has been estimated. Within the non-agricultural sector, a much sharper increase of labour productivity is expected in large-scale manufacturing and public utilities. In these activities the increase is calculated at about 25 per cent, almost 4.7 per cent annually. These trends are brought out in Table 3.

18. The creation of additional employment is one of the main instruments for creating demand for domestic manufactured products. In a rapidly growing economy it is necessary to stimulate the expansion of the domestic market for an increasing flow of output. As production must be undertaken on a mass scale in order to keep costs low and to permit competition in international markets, large numbers of people must receive increasing incomes in order to absorb the growing domestic supplies. A policy for widespread and equitable distribution of future income increases is thus required as a condition of economic growth as well as economic justice.

TABLE 3

LABOUR PRODUCTIVITY AND CAPITAL INTENSITY: 1950-70

Year	Employment (Million man-years)		Labour Productivity (1960-61=100)		Annual % rate of increase of:		Investment Totals (Rs. Mln.)	Employment increase (million man-years)	Incremental Capital—Labour ratio
	Agric.	Non-Agric.	Agric.	Non-Agric.	Agric. Labour Productivity	Non-Agric. Labour Productivity			
1950-51	16.25	5.45	93.6	95.1					
					0.5	0.7	6,800	1.85	3,650
1954-55	16.90	6.65	95.5	98.0					
					0.8	0.3	13,000	2.60	5,000
1960-61	17.85	8.30	100.0	100.0					
					1.5	1.3	18,650	3.55	5,250
1964-65	19.30	10.40	106.1	105.3					
					2.5	2.6	47,200	5.50	8,580
1969-70	21.80	13.40	119.8	119.4					

19. A policy to boost employment as rapidly as possible over the coming years together with a policy to increase the purchasing power of wage earners and other low income groups, especially in the agricultural and service sectors is thus a requirement of sound economic growth. Wage and price-policies must be determined in a manner to produce a gradual increase of the purchasing power of these groups, if possible at a somewhat faster rate than the increase in the national income.

Wage Policy:

20. Industrial labour in Pakistan is among the lowest paid in the world. The Minimum Wage Ordinance is applicable in onlya few industries, and in these too, the floor has been set at too low a level. For instance, in East Pakistan the minimum monthly wage enforceable for skilled workers in the match industry is Rs. 104, in cotton textiles Rs. 75, and in jute baling and pressing, Rs. 72. In West Pakistan, the minimum enforceable rates for skilled regular workers is Rs. 130 in the transport, steel and sugar industries. It should be noted that these are the rates for skilled workers in the highest paid zones; rates for apprentices and unskilled workers are correspondingly lower. Labour organisation is poor and with a continuous influx of unemployed from the rural areas, it is clear that the bargaining position of urban and industrial labour will remain weak and they will remain vulnerable to all sorts of exploitation. That this has already happened is evident from the fact that wages remain depressed despite considerable gains in labour productivity. It is clear that in the name of economic justice the Government will have to intervene with a policy for industrial wages.

21. It is proposed, therefore, that the following measures be taken during the Third Plan:

(a) Establishment of minimum wages for all large-scale industry to cover minimum adequate family budgets. These should be reviewed and redetermined annually. This would also firm up wages in small industries. This policy may result in some decrease in employment, which should be counteracted by an urban Works Programme.

(b) The Government should prepare careful and continuing studies of productivity and establish guidelines for wage increases related to the results of these studies. Productivity in large-scale industry is now probably increasing at 2 to 4 per cent per annum. Average wages can rise by this amount without increasing costs of production. Such guidelines should not prevent flexibility of wage rates which are necessary to attract workers to expanding industries. This means that unions and management should be free to establish a higher rate of increase while at the same time industry as a whole observes the established guidelines.

(c) Establishment of an urban Works Programme, not only to afford men the opportunity to support their families by the work of their hands, the most fundamental obligation of any society, but to convert now wasted labour into capital assets the nation so urgently needs.

(d) Increase in allocations for the rural works programme which, together with the rapid increase in agricultural employment now expected during the Third Plan, should bring unemployment in the rural areas to manageable proportions.

22. There are two aspects of a wage policy that call for specific comment. First, there is a question of whether a rise in wages will lead to a rise in prices. On the evidence available, the answer is in the negative. As shown above, the growth of labour productivity, especially in the industrial sector, has accelerated significantly in the Second Plan and is expected to increase even more sharply in the Third. If wage rate increases are kept within the limits of increasing productivity, it is clear that unit costs of production need not rise. Increasing competition in the industrial sector should ensure that stable costs of production are reflected in stable prices.

23. Second, it can be questioned whether a rise in wages can adversely affect savings. Again, the evidence indicates an answer in the negative. An expansion of the production and consumption of wage goods will not interfere with the mobilization of resources for development if the expansion of capacity by sectors is carefully balanced. The Third Plan projects a marginal rate of saving of about one quarter. This means that three-quarters of the planned increase in output will be available for consumption. From this it follows that after the increase of savings required for the financing of the Plan, an increase of about 28 per cent of consumption must be projected to which a larger part of the growth of output must be geared. Indeed, the production of consumer goods must be even larger if there is to be further progress in substituting domestic production for presently imported consumer goods. In fact, this is one of the assumptions on which the balance of payments for the Third Five-Year Plan is projected. The expansion of the consumer goods industry projected for the Third Plan period, therefore, is about 35 per cent and even more in the large scale manufacturing sector. This does not interfere with the requirement of additional savings for the Plan.

Urban Works Programme :

24. Economic growth, especially in its earlier stages, can be a brutal and sordid process. The seamier side of development usually shows up most clearly in towns where it takes the form of unemployment, destitution and slums. These, in turn, are the fore-runners of delinquency, vagrancy, disease and social tension.

In Pakistan, this was intensified by the influx of refugees at the time of the partition. These problems have so far resisted a solution because of the inadequacy of resources.

25. The rapid growth of the last five years, however, now makes it possible to tackle this question. In the Third Plan it is proposed to launch a bold, frontal attack on both urban unemployment and the deficiency of urban construction. The "Urban Works Programme" will have as its target the elimination of unemployment by putting the surplus labour to work on construction schemes. These will comprise both colonies for low-paid workers, as well as national buildings like railway stations, auditoriums, schools and colleges, parks, museums, etc. It is logical to base the employment programme on construction, because: (a) there is an important and obvious shortage of construction in urban areas; (b) this activity requires only a minimum expenditure on foreign exchange; (c) it can absorb considerable amounts of unskilled labour; and (d) it stimulates the growth of several ancillary industries.

Labour Relations :

26. The rapid growth of the industrial sector and the introduction of a wage policy will necessitate that additional measures be taken in the field of labour relations. The rigidities of the arbitration machinery should be carefully studied and removed wherever possible. A smooth operation is needed in order to limit to the minimum losses through strikes and through unsatisfactory labour relations. As an ever increasing part of national resources is vested in the modern sector of the economy, the need to keep the expansion going unhampered increases from the viewpoint of the national interest.

Education :

27. The growth of employment also puts a severe pressure on the country's capacity to train and educate sufficiently large numbers of people for future employment. There is already a marked shift towards demand for more skilled labour and this tendency will continue. Present estimates indicate that the capacity to train additional manpower is at best only capable of meeting half the requirement, and much is left to be desired with regard to the quality of this training. Only vigorous action at the present stage can be adequate to cope with this problem. Even so, the lack of trained teachers and training facilities may, for many years to come, make this a major obstacle to the rapid and accelerated development of the country.

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25. The rapid growth of the last five years, however, now makes it possible to tackle this question, and the Third Plan is expected to launch a direct, frontal attack on both urban unemployment and the deficiency in urban construction. The Public Works Programme will have as its target the elimination of unemployment by putting the surplus labour to work on construction schemes. These will comprise both colonies for low-paid workers, as well as national buildings like offices, stores, dispensaries, schools and colleges, parks, museums, etc. It is logical to base the employment programme on construction, because: (a) there is an important and obvious shortage of construction in urban areas; (b) this activity requires only a minimum expenditure in foreign exchange; (c) it can absorb considerable amounts of unskilled labour; and (d) it stimulates the growth of several ancillary industries.

Labour Relations

26. The rapid growth of the industrial sector and the introduction of a wage policy will necessitate that additional measures be taken in the field of labour relations. The functioning of the conciliation machinery should be carefully studied and improved wherever possible. A smooth operation is needed in order to limit to the minimum losses through strikes and through unsatisfactory labour relations. As an ever increasing part of national resources is vested in the modern sector of the economy, the need to keep the expansion going unhampered increases from the viewpoint of the national interest.

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CHAPTER XI

PUBLIC ADMINISTRATION AND PLAN IMPLEMENTATION

Progress since Independence

Administrative re-organization and reform have claimed the continuing attention of the Government of Pakistan since Independence. In the early post-Independence years, the principal problem, particularly at the Centre and in East Pakistan, was that of establishing new institutions of government and putting on the ground some sort of administrative machinery. Once this had been accomplished, the prime need was to make the new machinery function properly and at reasonable cost to the nation whose resources were by no means plentiful. This accounts for the fact that in the administrative enquiries made in the early years (*e.g.*, the Administrative Enquiry Committee, 1951, the Economy Committee, 1953), the main objectives were to streamline the governmental machinery in general, and to achieve economies in administrative expenditures.

2. The administrative philosophy handed down from the pre-Independence period visualized the principal functions of government as being the maintenance of law and order, administration of justice, and collection of revenues. An element of responsibility for the economic and social well-being of the people had been introduced as a result of post-Second World War planning undertaken in British India. This, however, had not progressed to any appreciable extent when Partition of the sub-continent came in August 1947.

3. Despite its pre-occupation with formidable problems resulting from Partition, the Government of Pakistan did not take long in picking up the thread of economic and social development from where it had been left in August 1947. The creation of a Development Board in the Central Government in 1948, with responsibility for co-ordinating nation-building schemes and determining their priorities, marked the beginning of a process which has culminated, through the years, in planned economic and social development now becoming the cornerstone of the Government's policy. Due to this decisive shift in the economic and social policies of the Government, recent administrative reform has been markedly oriented towards development. The reorientation has been helped greatly by the increasing size of public sector development programmes under the First and the Second Five-Year Plans, which placed heavy responsibilities upon the administrative machinery. Both the Plans therefore recommended extensive changes and improvements designed to make the administration equal to its rapidly increasing developmental responsibilities.

4. Many of the administrative improvements recommended in the first two Plans have been accepted by the Government and put into effect, particularly since 1958. In addition, administrative changes of a far reaching character have been introduced in the recent past on the recommendations of the Central and Provincial Administrative Re-organization Committees, the Provincial Administration Commission, and the Standing Organization Committee (1962). Studies made by Commissions and Committees set up by the Government to review individual fields, such as the Food and Agriculture Commission, the Commission on National Education, the Scientific Commission, the Medical Reforms Commission, the Credit Enquiry Commission, have also covered the administrative aspects and problems in the respective fields.

5. As a result of changes and improvements mentioned above, the administrative machinery for planning and implementation, both at the Centre and in the Provinces, has been strengthened appreciably. The major reforms, which are reviewed briefly in the relevant sections of this chapter, add up to a picture of substantial progress over a wide front. The process of administrative reform and reinforcement must, however, be continued and accelerated in order to keep pace with the rapidly increasing magnitude of the country's development effort, and to cope with the burden which it imposes upon the administrative machinery, both in the public sector where it has direct executive responsibility and in the private sector where its stimulating and regulatory role will continue during the foreseeable future. Experience has shown that development is a process in which every single administrative organ of government has a role to play, and also that developmental activities are no longer sharply distinguishable from the normal operations of public agencies. Reform must therefore eventually be all-embracing, although specified strategic areas will have to be given greater attention. Furthermore, it must be based on a much broader understanding of public administration than heretofore in order to reflect modern concepts of management.

Deficiencies in public administration

6. The deficiencies which still remain, even in the context of the existing responsibilities of the administration, relate to the following areas:

(*i*) Adaptation to decentralization of developmental functions resulting from the Constitution of 1962;

(*ii*) improving the working of semi-autonomous public corporations and authorities;

(*iii*) ensuring a continued supply of qualified and trained personnel at all levels, in the light of carefully assessed requirements;

(*iv*) modernization of personnel practices and public service policies, to secure improved per capita performance;

(*v*) strengthening the machinery for preparation of projects, their progressing and evaluation, and for research and statistics;

(*vi*) strengthening the institutions of Basic Democracies as instruments of local government, and continually increasing their developmental responsibilities;

(*vii*) modernization of financial administration and budgeting, and streamlining of the accounting system;

(*viii*) improved co-ordination between different agencies and levels of government; and

(*ix*) improvement of systems, procedures, and forms in use in government offices; codification of rules and regulations, and preparation of organization charts and manuals; and mechanization of repetitive operations where economically feasible.

To ensure the successful implementation of a development effort of ever-increasing dimensions in the economic and social sectors of the Third and future Plans, it will be necessary to draw up where possible carefully conceived programmes, incorporating concrete physical targets, for the systematic removal of the administrative deficiencies outlined above.

Strategic areas

7. As in the case of economic and social sectors, it is possible to identify strategic areas in public administration, concentration upon which can yield impressive returns, relatively quickly, in the form of improved performance by the administrative machinery as a whole. The foremost among these is that of personnel. There are all-round shortages of qualified and properly trained personnel. The techniques of personnel administration also need re-orientation at several points in order to secure improved employee performance, and to get the best out of the available scarce personnel resources. The Third Plan must, therefore, witness a particularly intensive effort in the personnel field. A strategic area in the institutional field is that of semi-autonomous public corporations and authorities. These have multiplied rapidly in recent years, and have taken over specified developmental functions from conventional government departments in sectors of crucial importance to the economy (*e.g.*, water and power, industry, fuels and minerals, agriculture, inland water transport, shipping, civil aviation). Steps are necessary to ensure that these agencies achieve the objectives for which they were created and do so efficiently. Another area requiring prior attention is that of machinery for the preparation of projects and programmes and for their progressing and evaluation. The strengthening of arrangements in this behalf, including the setting up of an efficient reporting system, can bring about considerable improvement in the planning and implementation processes. Still another strategic area is that of financial administration, where the introduction of modern concepts of budgetary management and a streamlined system of accounting can lead to improvements over a wide area of development administration. Similarly,

the strengthening of the institutions of Basic Democracies as instruments of local government can perceptibly improve project planning and implementation at the divisional, district, and local levels. All these matters are dealt with in greater detail later in this chapter.

ORGANIZATION AND PROCEDURES FOR PLANNING

8. The planning machinery, both at the Centre and in the Provinces, has been strengthened and streamlined considerably during the Second Plan period. The present position is briefly reviewed in the next few paragraphs.

Organization at the national level

9. The National Economic Council (NEC), created in December 1962 under Article 145 of the Constitution and headed by the President with ministerial-level representation from the Central and Provincial Governments, is now the supreme economic body in the country. The Council is responsible *inter alia* for the approval of Five-Year Plans and for ensuring the balanced development of the country as a whole. The Planning Commission, which serves as the chief instrument of the Council for the formulation of national plans, has been strengthened and its charter expanded to cover, besides functions connected with national planning, the overall evaluation of plans and preparatory work connected with foreign aid. The President is also Chairman of the Planning Commission and its Deputy Chairman has the status of a Central Minister. The office of the Commission has been made a Division of the President's Secretariat giving the Commission that recognized status within the hierarchy of government institutions which was previously lacking. The Economic Affairs Division, still primarily responsible for negotiation and administration of aid, has been placed under the charge of the Deputy Chairman, Planning Commission to ensure closer collaboration between the two agencies in the vital sphere of foreign aid. The planning process is now well dovetailed with the formulation of day-to-day economic policies, through the Planning Commission's representation on decision-making bodies operating under various Ministries and Departments of Government.

10. An Executive Committee of the National Economic Council (ECNEC) has been set up for sanctioning, on the recommendations of an inter-departmental standing committee known as the Central Development Working Party (CDWP), development schemes costing more than prescribed financial limits: Rs. 2 million recurring and 5 million non-recurring in the case of Provincial schemes and Rs. 0.5 million recurring and 2.5 million non-recurring in the case of Central schemes. Schemes below these financial limits can be sanctioned by the Provincial Governments, who have set up counterparts of the CDWP, and Central Ministries and Divisions themselves. Simultaneous rather than successive examination of schemes by members of the Development Working Parties is a feature of these arrangements which have undoubtedly quickened the process of administrative and financial clearance of schemes.

11. In pursuance of a Cabinet directive issued in July 1961, planning cells were set up in some of the Central Ministries, and proposed for certain others, to co-ordinate the preparation of detailed programmes for the national plan, assess the manpower and training requirements of the programmes, and determine the needs for materials and equipment to be procured to implement programmes. The need for planning cells had to be reviewed following the transfer of developmental responsibilities in a number of sectors from the Centre to the Provinces under the new Constitution. The Standing Organization Committee (1962) recommended that no planning cells were needed in Ministries which had shed their substantive developmental functions to the Provinces, that for Central projects the planning cells should be lodged in the technical departments attached to the Ministries, and that Ministries responsible for more than one sector of development might, if necessary, have a cell for integrating and co-ordinating plans of various sectors from a broader angle of national development but not for purposes of technical scrutiny. Since then, it has been suggested that each Ministry having developmental functions should set up a planning and development committee headed by the Secretary to review schemes prepared by the related technical departments from a broader angle, effect co-ordination, and determine priorities. An early decision is necessary on the question of planning cells/planning and development committees so that satisfactory arrangements are installed with the least possible delay.

Provincial and sub-Provincial organizations

12. In the Provinces also, the position has improved perceptibly. The Planning and Development Departments, responsible for co-ordinating Provincial plans and ensuring their proper implementation, have been strengthened and placed under the charge of Additional Chief Secretaries. Many of the Provincial departments have been reorganized to allow greater functional homogeneity. Planning cells staffed by technicians and economists have been set up in some Provincial departments to facilitate preparation of feasible projects and maintain liaison with the Provincial Planning and Development Departments.

13. In East Pakistan, a Planning Board headed by the Additional Chief Secretary (Development) has been set up to give expert advice on the formulation of plans. The Provincial Statistical Bureau has been strengthened and integrated into the Planning and Development Department to serve as an attached statistical office. A scheme to bring within the orbit of the Bureau all statistical units now operating under different departments is being worked out. A Projects Division also exists, as part of the Provincial Planning Department, with responsibility for inspecting, reporting, and evaluating implementation of the Provincial programmes.

14. In West Pakistan, the Planning and Development Department has been strengthened with additional technical and economic staff. The Bureau of Statistics

has been strengthened. In the field of progressing and evaluation, the Project Wing of the Planning and Development Department is doing useful work. Efforts are being made, through special programmes and seminars at the National Institute of Public Administration, Lahore to train officers in the techniques of preparation of schemes and projects.

15. With respect to the divisional, district, and local levels, mention must be made of the institutions of Basic Democracies which are now responsible in both Wings for initiating and executing development projects and programmes affecting local populations, especially projects included in the Rural Works Programme. This constitutes an important measure for the decentralization of planning and development operations. The Basic Democracies are also helping to create valuable infra-structure in the rural areas.

Some suggested improvements

16. The measures enumerated above have improved distinctly the organization for planning at the Central and Provincial levels. There is need, however, for further improvement, particularly in the Provinces which are now constitutionally responsible for most of the developmental sectors of the economy. The Provincial Planning and Development Departments need to be expanded, provided with additional economic and technical staff, and organized more elaborately to discharge their expanding role and provide leadership and direction to the executive agencies. The functional homogeneity introduced as a result of recent re-organizations needs to be carried further and extended to those cases (*e.g.*, physical planning and housing) where functions of a closely allied nature are still dispersed over several different agencies. Planning cells need to be created in those Departments which still do not have them; those already in existence need to be strengthened with the requisite professional staff. The functions of the planning cells need to be expanded to include more direct responsibility for progressing and evaluation of projects, and ensuring their timely execution. These cells should also be made responsible for the determination of implementation plans for various projects directed to the attainment of programme objectives.

17. In particular, it is necessary to improve greatly the capacity of the planning cells and the executing agencies to prepare sound projects and programmes. At present this capacity does note measure up to the level required by the targets of the Third Plan. The technical basis of projects is generally weak, leading *inter alia* to incorrect estimation of costs and unreliable cost-benefit ratios. No basic yardsticks or standard costs have been laid down to permit a proper assessment of the quality of different programmes or projects. Management aspects of projects receive little attention at the time of project formulation. These are serious deficiencies. Among other things, they have been responsible for delays and difficulties in securing aid for projects. Every effort must be made to overcome the deficiencies with the least possible delay, so as to build up

a large enough portfolio of well worked out projects to support the Third Plan. Where necessary, technical assistance should continue to be secured, specially for the conduct of pre-investment surveys and feasibility studies. At the same time, maximum use should be made of indigenous talent in those areas where people or concerns of the requisite experience and capabilities are available. In-service training courses in project preparation, launched on an extensive scale during the Third Plan period, may help in meeting this problem to an appreciable extent. The subject of project formulation should be introduced as an important and specialized syllabus item at the different administrative training institutions. The Planning Commission should prepare, or assist in the preparation of, a development manual setting out *inter alia* the basic criteria and methods of project preparation. This would help standardize the preparatory work for smaller projects and release scarce personnel for more thorough preparation of larger schemes. Manuals explaining the methodology for formulating projects in individual sectors, on the lines of those in force in Railways and Irrigation Departments, should also be prepared. To secure more uniform standards in the preparation and appraisal of projects, the planning cells should be more closely associated with the Provincial Planning and Development Departments than at present.

18. Government has recently decided to create a Projects Division in the President's Secretariat, under the supervision of the Deputy Chairman, Planning Commission. Besides watching the implementation of major projects and programmes and evaluating the national Plan, the Division is intended to stimulate the preparation of projects in those sectors and sub-sectors where an adequate portfolio is not available to achieve the physical and financial targets of the Plan, and to evolve appropriate cost and physical standards for project preparation. It is hoped that the proposed new agency will be able to help solve effectively the problem of unsatisfactory project preparation.

19. The need for strengthening the machinery for planning at divisional and local levels is also important. The policy of the Government, that the institutions of Basic Democracies play an increasingly important role in the sphere of local and regional development, needs to be translated into concrete action on an urgent basis. Positive action is also needed to ensure that these institutions develop gradually into vital instruments of local government, and that through these institutions the local people are associated increasingly in the administration of their affairs. To this end, it is necessary to provide local councils with the required staff and administrative and financial support, and consistent with these resources to transfer gradually to them such additional functions as may be possible. Steps are also needed to arrest trends observed in certain sectors (*e.g.*, education), where policies adopted militate against the objective of developing Basic Democracies as vital instruments of local government and relegate them to a supporting rather than a leading role.

Framework for economic policies

20. The improvement of institutional frame-work for the formulation of economic policies has been a major factor in the success of the Second Plan. With the changing structure of the economy, economic decisions tend to become more complex and require a more solid factual and analytical basis. Until 1962, the Planning Commission was associated with the formulation and co-ordination of economic policies through representation on the Economic Committee of Cabinet. This Cabinet Committee was abolished early in 1962. It was replaced by a Secretary-level Economic Policy Co-ordination Committee which was also disbanded a few months later. Economic co-ordination is now being effected by the Central Cabinet as a whole. There appears to be need for a compact body, assisted by adequate research staff, for keeping a continuous watch on the economic situation and relating economic, monetary, and fiscal policies to the objectives of the national plan.

21. Despite the significant shift which has recently occurred from direct to indirect controls, public services in the Central and Provincial Governments continue to shoulder a major responsibility for regulating and stimulating activity in the private sector. This is unavoidable in an economic situation which is changing rapidly, and in a society where many important non-economic objectives have to be reconciled with the basic economic objectives. At the same time, however, it is necessary to ensure that the dynamism of the private sector is allowed to make its maximum contribution to the growth of the economy. This can be done by allowing the forces of free competition to exercise full pressure for improved quality and reduced costs, by stimulating entrepreneurial ability through a rapid expansion of medium and small-scale enterprises, and by a careful review of existing control and licensing procedures.

IMPLEMENTATION IN THE PUBLIC SECTOR

22. Despite the existing policy of maximum reliance on private enterprise, the role of the public sector will expand during the Third Plan period in several key sectors, especially in the field of heavy industry. This is principally attributable to the size of the market in this country for products of the principal heavy industries. At present this market is so limited that there is little justification for more than one or two optimum scale plants. There is a dilemma here. If plants in such industries are restricted to the economically optimum number of one or two and are located in the private sector, it would be impossible to avoid a monopolistic or a duopolistic situation, which is fraught with grave political and social implications. If, on the contrary, for considerations of economic egalitarianism and in disregard of economic criteria, a proliferation of industrial units is permitted, a situation can develop where the industrial complex becomes overcapitalized, inefficient, and incapable of building up any export capability. This

would also needlessly increase the country's maintenance bill, by denying the exploitation of economies of scale. A number of industries in Pakistan are suffering from this malaise. The situation can only be remedied by setting up economically optimum plants in the public sector.

23. The public sector will be required to implement a much larger programme in the Third Plan than in the Second. This will require substantial strengthening and improvement in the working of the public corporations and departments concerned.

Semi-autonomous public agencies

24. In recent years, semi-autonomous public corporations and authorities have been utilized increasingly for implementing development programmes in the public sector. On a tentative estimate, agencies in this category are expected to handle around 55 per cent of the total public sector allocation under the Third Plan. The operations of these agencies are spread over practically all important sectors of the economy. This makes their satisfactory and efficient functioning a matter of crucial importance, not only to the respective fields but to the entire economy.

25. In overall terms, the implementation of public sector programmes has been accelerated markedly as a result of the operations of the autonomous agencies. Their performance has not, however, been of a uniform quality. There is also evidence of inadequate appreciation, both within and outside the agencies, of their important role in the process of capital formation and of the need for sound pricing policies and economic efficiency.

26. It is commonly believed that public undertakings as a rule lack the vigour and resourcefulness associated with private enterprise, that a business enterprise undertaken by the Government will be subject to too much departmentalism and red tape. The actual operation of certain public enterprises would suggest that this belief is by no means without foundation. It is difficult to see, however, why productive inefficiency should be inherent in public enterprises. If public corporations are in some instances lacking in vigour and initiative, the fault will perhaps very often be found to lie in operational arrangements. It is a commonplace, and like all commonplaces it is apt to be forgotten, that public corporations must be run on business lines, that they should as far as possible be independent of detailed bureaucratic control, and that a way should be found for encouraging and sustaining a competitive spirit in them.

27. It is necessary to make a balanced and careful assessment of the performance and working of the various autonomous agencies, in order to identify factors prejudicial to their satisfactory operation. Effective measures should then be taken to remove these factors, to promote economic efficiency, to ensure that

these agencies play their due role in capital formation, and in general to raise their implementation capacities to levels required by targets of the Third Plan. An effective solution should also be sought to the problem of exercising sufficient control to ensure strict public accountability and conformity with public policies, without affecting the operational flexibility essential to successful business management. The study in question should include a detailed survey of the internal working of corporations and their relationships with the departments concerned, and should be accorded a high priority. It may be undertaken by the Efficiency and O. & M. Wing of the Establishment Division or the Provincial O. & M. units, as the case may be, in collaboration with the Planning Commission and other Ministries/Departments concerned. Regular periodical consultations between the managements of the various autonomous agencies, especially those operating in related fields, can be helpful in improving the capability of these agencies to solve important implementation and other problems encountered by them.

28. Steps are also required to ensure the regular supply of suitable administrative talent to public corporations and authorities. At present, the manning of these agencies is generally done on an *ad hoc* basis, largely by deputation or transfer from government departments. This is inconsistent with the nature and importance of the tasks assigned to them. It does not also very much help to increase the net supply of personnel. The Plan Outline suggested the creation of an Industrial Management Pool, drawn partly from the public services and partly from business and industry on the lines of one now operating in India. Subsequent reports show that the Pool has not been very successful in that country. A long-term solution to the problem may be the creation of a duly constituted Industrial Management Service, recruitment to which could be made on the basis of an open competitive examination. Alternatively, it might eventually be found necessary to place the responsibility for recruiting, training, and developing their own personnel (except at the highest levels) squarely on the top-managements of the agencies concerned. In the short run, however, the problem may be met by strengthening deputation reserves in the Economic Pool and other superior services or otherwise expanding the services, so as to enable a larger number of officers being deputed from those services to the autonomous agencies in future. The officers thus deputed will need to be given appropriate training in order to meet the specialized needs of the different agencies. In determining a permanent solution to this problem, it should be remembered that the operations of the autonomous agencies are more closely allied to those in business and industry than to those in governmental administration, that the need for professional specialization which is being increasingly felt in the operations of normal government departments is even more strikingly apparent in the case of autonomous agencies, and that the conventional methods followed in meeting personnel requirements of government departments will generally not apply in manning these agencies.

Government ministries and departments

29. In respect of programmes which are directly executed by conventional ministries and departments such as Agriculture, Education, Health, Labour, the need for improvement is also great. Effective steps to evaluate the performance of major developmental departments, to assess their capacity to produce sound projects as well as to implement the larger sectoral programmes contemplated under the Third Plan, to promote the expanded application of management techniques, and to improve their efficiency, are necessary to minimize the waste of resources and delays in implementation. The Central and Provincial O. & M. Units are expected to undertake such evaluation as part of their normal functions, but a special drive would be necessary to survey major developmental ministries and departments in the light of the targets assigned to them under the Third Five-Year Plan. The question of functional homogeneity stressed earlier (para. 16) should also be examined as part of this evaluation.

Procedural bottlenecks

30. Delays in implementation of projects can be traced *inter alia* to a number of procedural impediments and difficulties. One of these relates to land acquisition, which is at present subject to frustratingly lengthy proceedings. Another concerns the licensing of imported materials required for implementing development projects. These and other procedures having a bearing on the execution of development programmes should be reviewed and urgent action taken to simplify and streamline them.

PROGRESSING AND EVALUATION OF PROJECTS AND PROGRAMMES

31. The responsibility for progressing and evaluation of provincial projects now rests primarily with the Provincial Governments. The units set up in the provinces for this purpose are doing useful work but need to be strengthened to be able to deal with the rapidly expanding volume of work involved. They should be provided with staff which is capable of undertaking technical and economic evaluation of projects itself and not only of compiling and collecting progress reports produced by executing agencies.

32. The Planning Commission is responsible for evaluating the progress of the Five-Year Plans and of individual Central projects. It has so far produced three annual evaluation reports of the Second Plan, and also a Preliminary Evaluation Report on the Plan as a whole. In addition, it has appraised many completed development projects. This activity needs substantial strengthening in order to provide a better basis for future planning. The Projects Division referred to above (para. 18) is intended to meet this need.

33. *Reporting system.*—A prime need is the establishment of an efficient and integrated reporting system under which all essential information about the

progress of development projects can flow with minimum time lag from the field to the highest levels. The progress reports on projects, required to be rendered at present on a quarterly basis, are not submitted regularly. What is more important, they do not provide for a continuous and qualitative assessment of performance, and do not bring out current weaknesses or anticipate problems requiring action at different levels. Arrangements to provide continuous feedback within individual executive agencies, which is an essential pre-requisite to the meaningful assessment of progress and performance, are universally inadequate. A good reporting system, which aims primarily at appraising progress towards pre-determined programme objectives, and which is closely linked with the budgetary process, is indispensable for remedying the situation. The planning cells in operating agencies, if properly staffed and equipped, could become the nerve centres for the collection and dissemination of significant and up-to-date information about the progress of projects, and thus become an important link in the reporting system.

34. An area needing particular attention in this context is the evaluation of projects *after their completion*. Regular submission of annual reports on completed projects is already prescribed, but needs to be enforced fully and strictly, especially in the case of major projects. The proformae prescribed for this purpose are out of date and need revision to cater to changed requirements. A good reporting system, on the lines recommended above, will ensure that the results of project evaluation are made available to the agencies concerned for guidance in the future planning and execution of projects. It will also serve to focus greater attention on the management aspects of projects, on which the success of even the most well-conceived projects crucially depends but which are generally neglected at present.

35. *Co-ordination.*—Effective steps are needed to co-ordinate the implementation of projects in one sector with allied projects in other sectors. In general, inter-agency consultation and co-ordination does take place when projects are formulated, although there is room for improvement even here, for example, in the co-ordination of projects for different modes of transportation, the movement of foreign and coastal traffic, and so on. At the stage of implementation, however, each department tends to concentrate mainly on its own tasks and does not always ensure that its programmes move in step with other related programmes. In the field of irrigation, for example, large projects have been constructed but have failed to yield the expected benefits because plans for colonization have lagged behind. Plans for generation of power are not always properly co-ordinated with those for power distribution, nor are plans for water supply and sewerage with those for urban development and housing. To remedy this situation, close and constant collaboration is required between agencies concerned with different interdependent aspects of projects. As a rule, the endeavour should be to frame comprehensive programmes rather than isolated projects, clearly indicating the various major components and the time schedules for each of them. It should be the special concern of the progress-watching machinery to ensure that a project proceeds according to schedule, and that other related projects move in step so that all of them start producing results simultaneously. Inter-departmental conferences should periodically review such projects to ensure co-ordinated execution.

36. The need for co-ordination is not only confined to the areas of project formulation and execution. It arises in almost every sphere of administration. The need for improved arrangements for the co-ordination of economic policies has been stressed already (para. 20). The transfer of substantive responsibilities in many areas from the Centre to the Provinces under the Constitution has posed problems of co-ordination among the two administrative levels which need to be resolved as expeditiously as possible. Co-ordination is also needed in projects formulated by the Centre but executed by the Provincial Governments. Effective co-ordinating devices are necessary at all levels to avoid duplication and delays, and to put scarce resources in men and materials to optimum use.

ADMINISTRATIVE DEVELOPMENT

37. Standing arrangements are necessary to ensure that the administrative machinery in the country is kept under constant review with special regard to the requirements of a rapidly expanding development programme. Developmental needs have been kept in view in a general way in administrative enquiries conducted in the past, but reform has not been specifically related to national five-year plans. What is needed is a planned approach to administrative development, under which systematic programmes are drawn up for the improvement of different areas of public administration (*e.g.*, training of personnel, administrative research, O. & M. coverage of public agencies, mechanization of government operations, procedural reforms), on the same lines as programmes in the economic and social sectors. Adequate machinery for these purposes does exist at the Centre where the Standing Organization Committee (SOC) and the National Administrative Training Council (NATC) are responsible respectively for reviewing the organization and procedures of Central ministries and divisions and the co-ordination of arrangements for training of administrative personnel. It would be advisable to set up or appropriately strengthen administrative arrangements pertaining to these fields in the Provinces also. The Central and Provincial agencies concerned should be charged specifically with the formulation of programmes for the improvement of different areas of public administration in their respective jurisdictions in the light of five year plans. The Planning Commission and the Provincial Planning and Development Departments should be closely associated with the work of the respective agencies. The Central SOC should devote special attention to the problem of Centre-Province administrative co-ordination mentioned in the preceding paragraph. It should also arrange a study of the administrative machinery of the country as a whole, in the light of the several reorganizations carried out in recent years, with a view to reconciling possible areas of conflict and duplication and filling gaps that may be observed. The results of different reorganizations should also be evaluated. The different areas of public administration requiring attention in this context are discussed in the succeeding paragraphs.

Staffing problems

38. An important deficiency is the all-round shortage of qualified personnel. This is specially true of the Provinces and particularly of East Pakistan which has a smaller reservoir of skills but for which a more rapid increase of development expenditures is envisaged under the Third Plan than for West Pakistan. On the recommendation of the Standing Organization Committee (1962), most of the Central staff previously engaged on work now belonging to the Provinces has been transferred to the latter. Several Central organizations and institutions have also been either bifurcated (*e.g.*, the Industrial Development Corporations) or transferred completely to the Provinces (*e.g.*, the Railways). The status of Provincial Secretaries incharge of important departments like Finance and Planning has been raised to that of Joint Secretary to the Central Government instead of Deputy Secretary, in view of the higher responsibilities now given to them. This process of strengthening the Provincial administrations should be progressively carried forward during the Third Plan period. Early steps should be taken to give effect to those of the accepted recommendations of the Standing Organization Committee which still remain unimplemented. Possibilities of further transfers of staff from the Central Government to the provinces should also be seriously considered.

Public service policies and personnel administration

39. There is need for modernization of public service policies and personnel practices and for their continued adaptation to the changing needs of development. This is one of the strategic areas of public administration. The process of modernization has been under way on the basis of studies made in recent past, but must be stepped up appreciably to produce tangible results. The Government, as the largest single employer, should give the lead to other employers in the country by adopting enlightened personnel management techniques and practices.

40. Reform is called for in many directions. For example, in an era of rapid technological progress and change, the technician and the specialist must be accorded the recognition and prestige due to him *vis-a-vis* the general administrator. Only thus can suitable professional talent be attracted and retained by the public services in the face of growing competition from the private sector. It can also help to arrest the flight of talent from the country. The salary and service conditions of the specialist should conform to the increasing importance of his role, and he should be given a greater say in the formulation of policies pertaining to his field. What is equally important, the specialist and the generalist must recognize the inter-dependent nature of their roles, and must therefore learn to operate in harmony and in an atmosphere of mutual respect for common organizational goals. Barriers to a healthy generalist-specialist relationship must be carefully identified and consciously broken down, through carefully planned training programmes, improved channels of communication, greater inter-cadre mobility and inter-changeability, and other appropriate measures. There is an

administrative element in the specialist function which tends to increase at the higher hierarchical levels. The specialist should, therefore, be trained in the basic techniques of administration fairly early in his career, and given periodic refresher courses later. Similarly, the general administrator should be provided, also through proper training, with reasonable insights into the specialities with which he comes into contact at various stages in his career. Arrangements for both these types of training should be established in the administrative and technical training institutions, and in universities where possible.

41. An important principle enunciated by the Administrative Reorganization Committee (1959), and accepted by the Government, was that public agencies engaged in work of a preponderantly specialist nature should be manned exclusively by technical people belonging to the relevant specialities. Possibilities should be explored of extending this principle, which has been applied in practice so far only to the Central Ministries of Health and Education, to corresponding Provincial departments, and to other appropriate Central and Provincial agencies. Recommendations made with similar objectives by the Standing Organization Committee (1962), *e.g.*, that there should be no scrutiny of technical aspects of cases in the secretariat, and that heads of technical departments should be accorded *ex-officio* secretariat status where necessary, should also be strictly enforced in future.

42. The measures discussed above will have to be supplemented by others, equally important, to produce the desired results. For example, career planning will have to be introduced so as to cover those categories of public servants who do not belong to regularly constituted services and cadres at present. This will promote administrative specialization and impart a long-range career perspective to the public service as a whole. Similarly, positive steps will have to be taken to provide equitable avenues of advancement to all branches of the public service, strictly on considerations of merit, quality of performance, and suitability for the job, eliminating the wide disparities in career prospects now observable among different classes of public servants. A step in this direction has already been taken through recognition of the principle that reservation of posts for certain categories of officers should not be allowed to supersede the claims of others to hold the reserved posts on the basis of superior merit and ability.

43. It is necessary to provide adequate incentives for good work and effective penalties for unsatisfactory performance. The introduction of an elaborate incentive system, based on modern techniques of motivation, can lead to perceptible improvements in per capita performance. The idea-award scheme introduced in the Central Government, under which monetary or testimonial awards are made to employees making creative suggestions for improving administration, is a step in the right direction. It should be supplemented with other measures. Positive premium should be placed on honest and hard work, specially in positions involv-

ing the exercise of large powers and wide discretion. A necessary pre-requisite to the institution of an incentive system is the laying down of measureable performance standards.

44. Effective measures are needed to build up the moral character of public servants and to eradicate corruption from the public services. This is of crucial importance for the efficient and economical execution of development programmes and policies, pertaining to both the public and the private sectors. It requires not only the strict enforcement of prescribed penalties and deterrents, and the appropriate simplification of disciplinary procedures governing public servants, but also an intensive educational campaign under pre-entry and in-service training programmes. Government has given considerable thought to the problems of rooting out corruption and ensuring expeditious disposal of complaints from the public. The need has been recognized for supplementing the traditional anti-corruption machinery of the Central and Provincial Governments with devices of a more dynamic and flexible nature. The Government of West Pakistan set up a high-level Inspection Team sometime ago, one of its functions being to check corruption. A similar organization is understood to exist in East Pakistan. At the Centre this work has recently been entrusted to the Cabinet Secretary. Steps should be taken during the Third Plan period to develop a comprehensive but streamlined and effective machinery for eradicating corruption. It might be advisable to set up a Commission or a high-level Committee to go into the various aspects of the matter and recommend suitable procedural, institutional and other measures.

45. Staff welfare measures need to be stepped up. An allocation of Rs. 5 million is included in the Social Welfare sector of the Plan for employee welfare schemes of the Central Government. In view of the importance of this activity from the point of view of personnel administration, the Provincial Governments might do well to follow suit even though on a modest scale.

46. The importance and urgency of development operations calls for more liberal, but carefully conceived, delegation of decision-making powers to the middle and lower levels of government organizations and to officers in the field. For similar reasons, a balanced approach, aimed at securing both breadth as well as depth of experience, is needed to the problem of transfers of personnel, specially those appointed to key positions and those charged with implementation of important projects. Too frequent transfers militate against the continuity of operations essential to development, and also create personal problems which adversely affect the quality of performance of the officials concerned. On the other hand, infrequent transfers disallow breadth of experience and may in certain cases promote the development of entrenched interests.

Delays in recruitment

47. An important area requiring reform is that of recruitment through the Central and Provincial Public Service Commissions. In most cases, it takes very long to recruit persons through these media. This seriously handicaps the admin-

istrative agencies concerned who are in most cases pressed for time in the recruitment of people for urgent development work. It also increases instances of *ad hoc* recruitment which in turn create avoidable complications in personnel administration. One of the means of speeding up the recruitment machinery would be to enlarge the membership of the Public Service Commissions, so that they can form an adequate number of committees to deal with the increasing volume of recruitment work. Another would be maintenance by the Commissions of up-to-date panels of suitable approved candidates in different specialities from which nominations can be made as and when required. This in turn would require the standardization of recruitment rules and qualifications for posts of a comparable nature in different ministries and departments. The introduction of modern testing techniques can also improve the capacity of the Commissions to select suitable candidates. These and similar reforms can help appreciably in preserving the prestige of the Commissions and reducing instances in which the advice of the Commissions in recruitment matters is disregarded by administrative agencies. The Central Government has recently appointed a high-level committee to examine the recruitment procedures followed by the Public Service Commissions and to suggest improvements in them.

Training and education

48. Facilities for the training of administrative personnel have been improved perceptibly during the First and Second Plan periods, through the creation of institutions like the Pakistan Administrative Staff College, Lahore, the National Institutes of Public Administration at Karachi, Lahore, and Dacca, the Civil Service and the Finance Service Academies, the Secretariat Training Institute, Karachi, the Academies for Rural Development at Comilla and Peshawar, a Gazetted Officers Training Academy in East Pakistan, and accounts academies at Karachi, Lahore, Dacca, and Quetta. An institute and four regional centres for the training of junior secretariat staff are proposed to be established in West Pakistan during the Third Plan period. Steps should be taken to increase the capacities of these institutions, to remove overlapping in their activities where noticed, and above all to carry training to the departments and field units. Earnest consideration should be given to launch and expand "on-the-job" training programmes for managerial and supervisory personnel. These have produced impressive results in other countries and can be particularly beneficial and economical in Pakistan where institutional training facilities both in universities and under the Government are limited. The question of creating O. & M-*cum*-training cells in Government ministries and departments as well as in autonomous agencies, responsible for training officers and staff in better management practices, also requires careful and urgent consideration.

49. An assessment should be made of the requirements of trained administrators and managers for the next five years, both for government department and semi-autonomous agencies, and in the light of this assessment specific training

targets should be laid down for achievement during the Third Plan period. A programme of strengthening existing training institutions, or creating new institutions where warranted, should then be drawn up on the basis of training targets thus determined. For the future, the survey of personnel needs and resources should become a continuing periodic operation. The National Administrative Training Council should devote special attention to this important task, preliminary work on which has already been initiated by the Training Wing of the Establishment Division. The Council should provide leadership in the field of administrative training throughout the country. As one of its important tasks, the Council should undertake the preparation of a comprehensive personnel development plan. To enable the Council to function effectively in these areas, its secretariat should be appropriately strengthened. The Council should also stimulate the creation of an adequate training machinery in the Provinces. An allocation of Rs. 10 million has been made in the Education and Training sector of the Plan for training schemes in public administration.

50. Arrangements should be made for regular periodical evaluation of individual training programmes as well as of the training effort of the country as a whole, in order to assess their effectiveness and adequacy. The training courses and syllabi should be oriented increasingly to the practical needs of the different categories of trainees, so as to gear the training to the on-going operations of government, and training materials should be designed accordingly. Training courses should particularly highlight improved management techniques which can help improve efficiency and productivity of personnel as well as agencies of government. Increasing use should be made of case studies for instructional purposes, and steps should be taken for the preparation of representative case studies in a variety of fields. A broad understanding of economic planning should be made an integral part of the training curricula. The preparation, progressing and evaluation of projects should also be introduced as regular syllabus items in the training courses. Marked emphasis should be placed on promoting among the trainees an appreciation of the need for "administrative planning". The execution of development projects, conceived in accordance with prescribed time-schedules, can be improved considerably if the officials responsible for their execution learn to plan their work in advance.

51. Action is also required for the expansion and systematic development of facilities for education in public administration. This is a matter deserving high priority within the public administration sector. Some of the universities have started, or propose to start, diploma, graduate or post-graduate courses in public administration. They should be provided with every possible assistance to establish such courses or to set up departments of public administration. In designing the curricula for the courses, emphasis should be placed upon the professional and practical content of public administration. Towards this end, there should be close collaboration between the universities on the one hand, and the Establish-

ment Division, the Planning Commission, the Provincial Departments of Services and General Administration, and in-service administrative training institutions like the Pakistan Administrative Staff College and the National Institutes of Public Administration on the other. A special placement service has been set up by the University of the Panjab which publishes the bio data of its public administration students from year to year and assists the students to establish necessary contacts with prospective employers. Similar placement services may be set up by other universities which have started or are proposing to start courses in public administration. At the same time, to meet requirements arising out of the increasing professionalization of public administration, personnel policies of public and semi-public agencies should be revised in order to provide for greater recognition to academic qualifications in public administration for recruitment purposes.

52. To provide semi-autonomous agencies and government departments engaged in operations of a commercial nature with suitable talent which could be developed into competent business executives, adequate facilities for business education are also needed. The Institute of Business Administration, University of Karachi is meeting part of the requirements in this behalf in West Pakistan. The development of similar facilities in East Pakistan is planned for the near future. Steps should be taken to expand these facilities to meet current and future requirements for executive talent.

Employment of women

53. The country has now reached a stage of development where the question of employment of women in public service should receive greater attention. There has been a perceptible increase in recent years in the number of women who have received general as well as technical education. At present, owing to the absence of a definite policy in this regard, advantage has not been taken of this development to any significant extent. It is necessary to lay down a positive policy on the subject. As a prelude to the formulation of such a policy, studies should be initiated for assessing the present employment situation of women and the prospects for increasing their employment, particularly in those positions where they can be more efficient and useful than men. Concrete steps should also be taken, through improved pay, status and service facilities to attract women to those professions (*e.g.*, nursing) where there is considerable scope for their employment but where shortages continue to persist.

Technical assistance

54. Technical assistance is available to Pakistan from different sources and in different forms. The impact of the technical assistance programmes has on the whole been favourable and efforts must continue to put this assistance to still better and more profitable use. A committee appointed in 1959 to review technical assistance programmes made a number of recommendations to improve the working of these programmes, including the formulation of an integrated programme of technical training in the light of Five-Year Plans, improved selection of candidates, simplification of procedures, and adherence to prescribed procedures by ministries and departments. A majority of these recommendations are

reported to have been implemented. The most important need is for detailed and careful evaluation of technical assistance on a continuing basis. The policy with regard to employment of foreign consultants needs to be carefully studied and suitably modified so as to permit optimum use of this scarce and costly resource. Government has recently appointed a committee to examine this question. The utmost emphasis in any measures contemplated in this behalf should be on the maximum utilization of consultants for training of Pakistanis who can eventually work independently. The training responsibility of consultants should be clearly reflected in all technical assistance agreements. Effective steps should also be taken to ensure that the services of Pakistanis trained abroad under technical assistance programmes are utilized properly and in fields in which they have been trained.

Research and statistics

55. Research is a fundamental component of the planning and administrative processes. In Pakistan, both the organization and the facilities for research, specially economic and administrative research, leave much to be desired. The Planning Commission is responsible for promoting economic research and the National Administrative Training Council for stimulating administrative research, but both agencies have been unable to discharge their responsibilities adequately due to paucity of staff and funds. The Third Plan should witness a determined drive to promote economic and administrative research. The universities should be brought increasingly into the process, and assisted in every possible manner to become eventually the leading centres of research. The Institute of Development Economics at Karachi should be strengthened. To co-ordinate research and publications in the field of public administration, an attached department of the Establishment Division, designated as the "All Pakistan Administrative Research Centre", and an advisory body known as the "Pakistan Council for Research in Public Administration" are to be set up at Lahore during the Third Plan period. The proposed Centre should fulfil the long-felt need for an effective medium to ensure the conduct of administrative research in the country in an organized and co-ordinated manner. It should give prior attention to the formulation of a five-year programme of administrative research.

56. It is necessary to reiterate here the recommendation made in the Second Five-Year Plan (Chapter 6, para. 19) for the early creation of regularly constituted services of economists and statisticians. Besides being an important step towards recognition of importance of research specialists to the future of the country, the proposed measure will, by stabilizing the service conditions and career prospects of these services, help attract more and better talent to the field of research. A working group, appointed by the Planning Commission and including representatives from the Establishment Division, the Economic Affairs Division, the Ministry of Finance, the Central Public Service Commission, and the two Provincial Governments, is going into this question in detail at present.

57. There is need to strengthen the machinery for collection, compilation and dissemination of statistics, which provide the basis for research and are the backbone of sound planning. Some progress has been made during recent years. The Central Statistical Office (CSO) and the Provincial Bureaus of Statistics

have been strengthened. The National Sample Survey Organization, established as part of CSO in 1958, has started providing up-to-date economic statistics, and a National Statistical Council now co-ordinates the policies and programmes of all statistical agencies. A comprehensive Three-Year Plan for the development of statistical services drawn up by the CSO was approved by the Government sometime back, providing *inter alia* for the further strengthening of the CSO, the creation of a training division in it to develop a national programme of statistical training, and the passage of appropriate legislation to provide the needed statutory authority for the collection of statistics. Schemes for the construction of suitable office accommodation for the CSO, functionally designed for statistical operations, and the provision of modern equipment are under consideration. The question of providing adequate facilities for the training of statistical personnel is also being examined. This process of consolidation and improvement of the statistical services should be carried forward vigorously during the coming years. The statistical research and training institutes at the Provincial level should be strengthened. The existing departments of statistics in the universities should be strengthened by the addition of laboratories where practical applications can be taught and practised. Consideration should be given to establish departments of statistics in those universities which do not have them, including the Agricultural Universities at Lyallpur and Mymensingh.

Organization and management

58. The importance of creating O. & M. units at the Centre and in the Provinces was stressed in the First Plan. The need for strengthening these units and properly staffing them was emphasized in the Second Plan. The Efficiency and O. & M. Wing at the Centre is now doing useful work, but the Provincial units need to be strengthened and placed under full-time officers to be able to function effectively. Adequate arrangements are also necessary to train O. & M. officers in sufficient numbers to meet the requirements of the Central and Provincial O. & M. units and of the O. & M.-*cum*-training cells in individual ministries and departments recommended in para. 48 above. Personnel employed on O. & M. work should be provided with satisfactory terms of service commensurate with the nature and importance of their role. To supplement action recommended in the training field (para. 50), the O. & M. units should stimulate the practical application of modern management techniques to the operations of governmental agencies.

59. Both the Central and the Provincial O. & M. units should draw up systematic programmes for the O. & M. coverage of governmental agencies, and for codifying and simplifying government rules and regulations so as to provide a firmer basis for decision-making. They should also arrange the preparation and current maintenance of organization charts and manuals of principal units of the respective Governments.

60. It is necessary to launch a programme for streamlining and simplifying the systems, procedures, and forms used in government departments. A start has already been made under the aegis of the Efficiency and O. & M. Wing of the Establishment Division. The campaign should be intensified

during the Third Plan period. The Section Officers scheme operating in the Central and Provincial Governments, which is essentially a measure of procedural reform, should be kept under periodic re-appraisal to permit continued improvement in its working. Consideration should also be given to the mechanization of office operations where economically feasible. Careful studies should precede action in this field.

Financial control and budgeting

61. The First Five-Year Plan emphasized the importance of making the budget the most effective single instrument of financial control and management and made several recommendations towards this end. Subsequently this subject has received increasing attention of the Government. On the basis of recommendations made by the Administrative Reorganization Committee (1959), a revised system of financial control and budgeting was introduced in 1960. The salient features of this system were: (a) virtual abolition of the requirement for post-budget expenditure authorization by the Ministry of Finance, allowing the administrative Ministries to sanction expenditures within limits provided in the budget in consultation with their financial advisers in most cases; (b) making budgeting a continuing year-round process rather than a seasonal activity; (c) delegation of suitably enhanced financial powers to administrative Ministries; (d) nomination of Secretaries of administrative Ministries as "Principal Accounting Officers" for their respective Ministries, and the appointment of Financial Advisers to assist them in their new responsibilities; (e) closer co-ordination of the Annual Development Programme with the Budget; and (f) the requirement that only projects duly approved by competent authority shall be included in the Annual Development Programme and, therefore, in the budget. The system has been further revised recently on the basis of recommendations made by an expert committee. The Financial Advisers, who were originally made primarily responsible to the Secretaries of the administrative Ministries concerned, have now been placed under the administrative control of the Ministry of Finance. At the same time, to expedite the process of budgeting, it has been decided that Part I of the Budget, which relates to Standing Charges and expenditures of a fluctuating nature required to be incurred regularly each year, will now be scrutinized by the Financial Advisers instead of by the Budget Wing of the Ministry of Finance. Similarly, New Item statements in respect of Part II of the Budget, *i.e.*, Fresh Charges, are no longer required to be sent individually to the Ministry of Finance, but are to be compiled together with Part I of the Budget and then sent to the Budget Wing of the Ministry of Finance for consolidation.

62. The measures recalled above, and some other minor reforms, represent significant advances in the matter of streamlining the budgetary process and enhancing the effectiveness of the financial control system. However, the system

needs to be kept under constant re-appraisal in order to identify areas where further improvements can be carried out. Possibilities of further integration of the planning and budgeting processes should continue to be studied. Action should also be taken to introduce reforms in such areas of detail as the basic process and mechanics of budget preparation, presentation and review; budgetary classification; economic analysis of government budgets; introduction of programme and performance budgeting; proper training of personnel engaged in budgeting operations both in the Ministry of Finance and the operating agencies, and the like. This is necessary to establish the authority of the budget as an important instrument for achieving national development objectives, and to ensure that the budgeting system of the Government reflects ever more clearly the actual programme and performance of the management *vis-a-vis* the amounts budgeted and expended. A Budget Reforms Committee has recently concluded a detailed review of the budgetary process and has made far-reaching recommendations. Besides covering each of the areas enumerated above, the Committee has recommended the creation of Research and Statistical Cells in the Central Ministry of Finance and the Provincial Finance Departments, the introduction of maximum uniformity in the presentation of Central and Provincial budgets, and the establishment of adequate arrangements for the training (both within the country and abroad) of personnel in the techniques of economic analysis of budgets and other ancillary matters connected with the introduction of various budget reform measures. The recommendations of the Budget Reforms Committee have been accepted by the Government and a Standing Consultative Budgetary Committee has been appointed to supervise their implementation. It is hoped that the reforms to be introduced on the basis of these recommendations will go a long way in improving and modernizing the budgetary process and ensuring better budget-plan co-ordination.

Accounting system

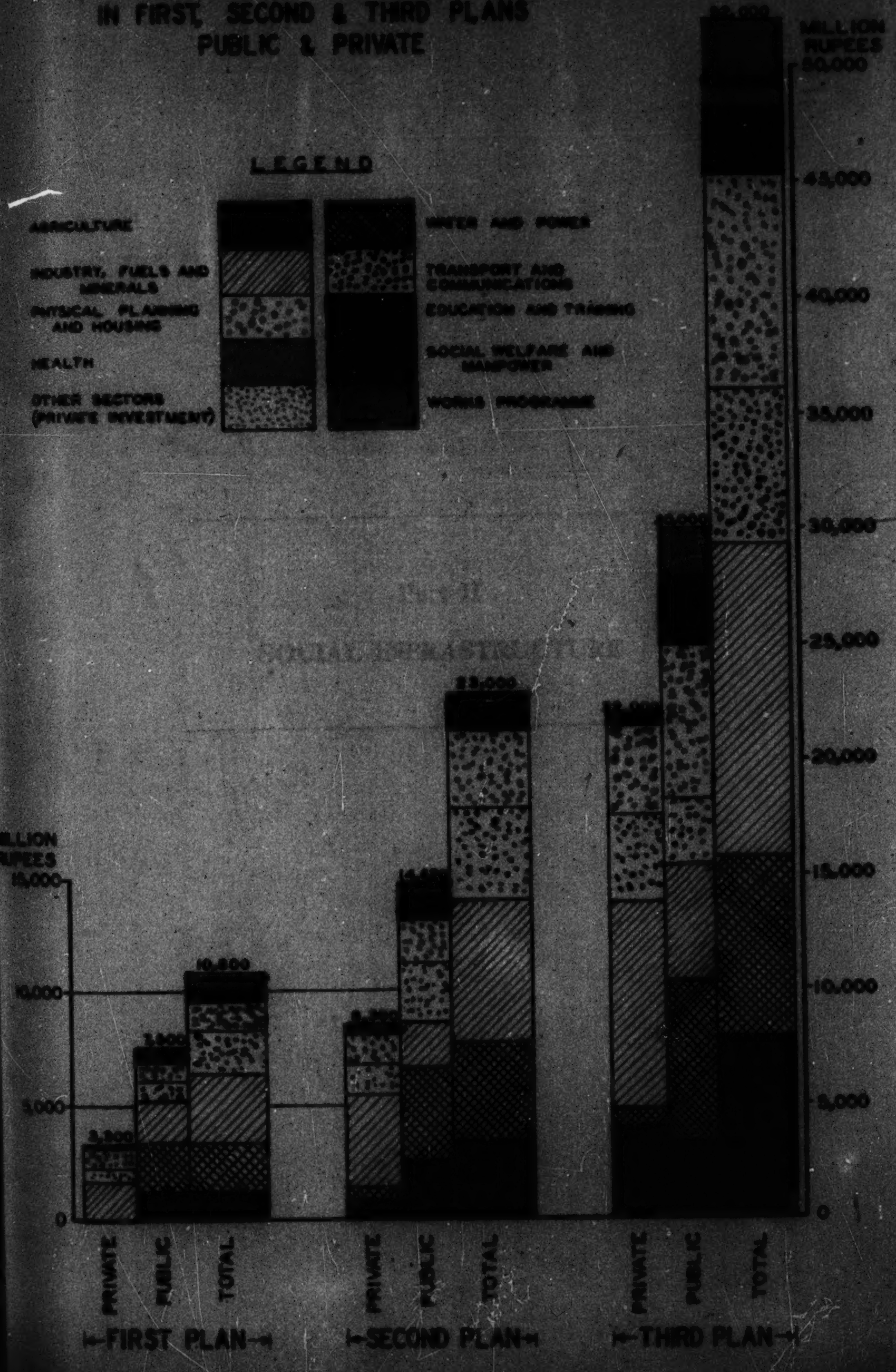
63. A streamlined system of accounts is essential *inter alia* for the proper and timely evaluation of development plans and programmes. The availability of up-to-date, accurate and meaningfully arranged data regarding government expenditures is also an important pre-requisite for the compilation of national income and social accounts. In most of its essentials, the accounting system now in use has been inherited from the colonial administration of the past, and is patently ill-adapted to present day requirements. An accounting system under which, for example, final accounts of a fiscal year (and sometimes even of a particular project) are not available till several years later has obviously no place in a dynamic administration geared to rapid economic development. The need for reform in this area is great and urgent.

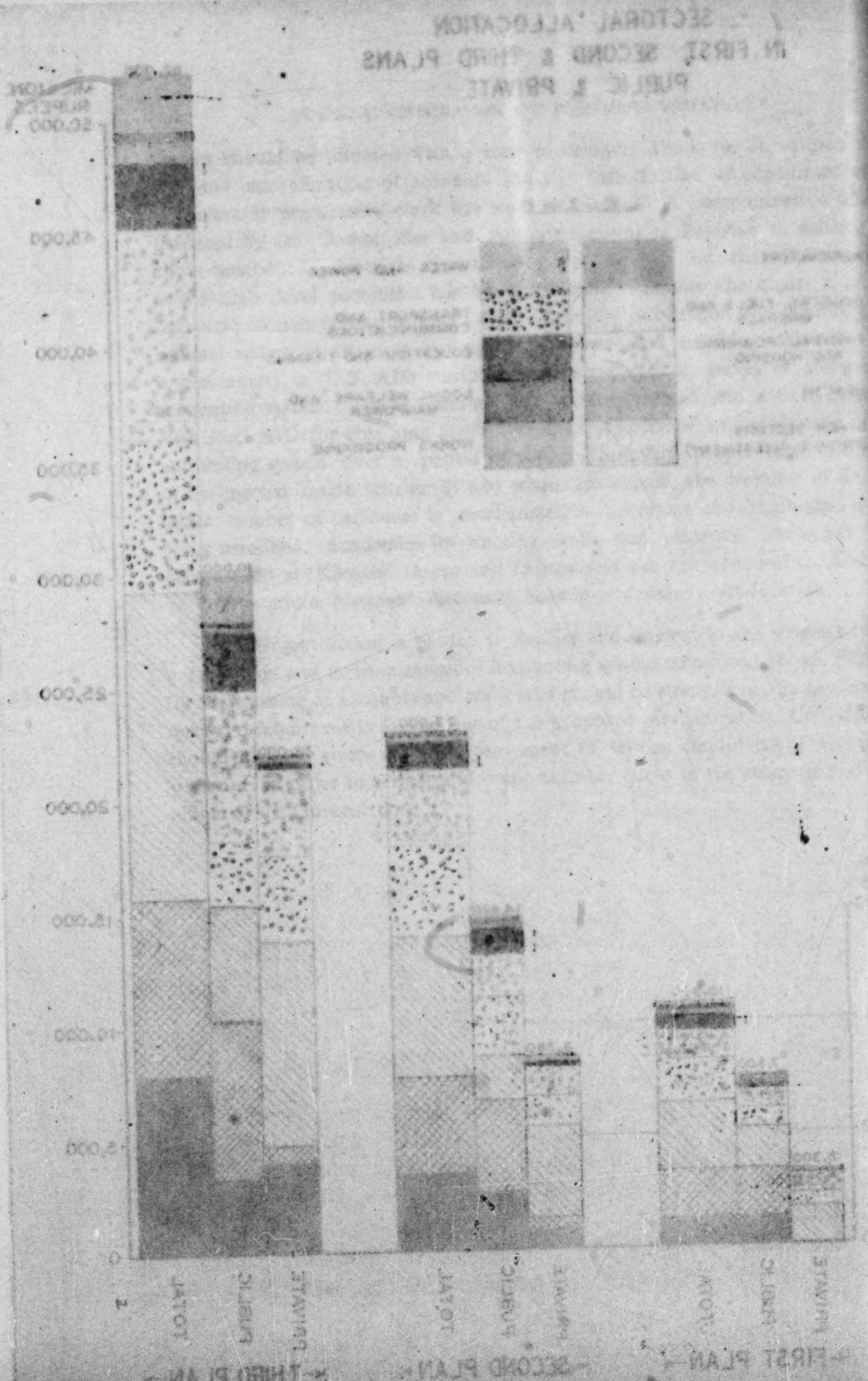
64. The Central Administrative Reorganization Committee (1959) recommended that expert and detailed investigation of the country's accounting

system should be initiated with a view to bringing about the departmentalization and mechanization of accounts and the introduction of concurrent audit. Considerable preparatory work has since been done. A comprehensive scheme prepared by the Comptroller and Auditor-General of Pakistan to achieve the above-mentioned objectives is under consideration by the Government, and a high level committee has been set up to examine the question of reorganization in its various aspects. Simultaneously, the question of substituting the manual system of accounts by mechanization is also receiving attention. As a preliminary, a U.S. AID consultant has conducted a survey of the present accounting system. The Government has recently entered into a fresh contract with U.S. AID for obtaining expert advice in respect of mechanization of the accounting system over a period of time. To ensure proper implementation of the mechanization scheme as and when introduced, the training of an adequate number of personnel in mechanization processes and techniques is also being arranged. Academies for training audit and accounts personnel have been set up at Karachi, Dacca and Lahore and the conversion of the academy at Quetta into a National Accounts Academy is under consideration.

65. Urgent action is needed to finalize and implement the schemes for reorganization and mechanization of accounting system mentioned above. Facilities for the training of accounts and audit staff should be strengthened as necessary to meet the requirements arising out of the proposed reorganization. Consideration should also be given to the improvement of service conditions of accounting personnel in order to attract and retain suitable talent in the accounts and audit offices of the Government.

SECTORAL ALLOCATION IN FIRST, SECOND & THIRD PLANS PUBLIC & PRIVATE




SECTORAL ALLOCATION
IN FIRST, SECOND & THIRD PLANS
PUBLIC & PRIVATE
MILLION RUPEES
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
WATER AND POWER
TRANSPORT AND COMMUNICATIONS
EDUCATION AND TRAINING
SOCIAL WELFARE AND MANPOWER
WORKS PROGRAMME
PHYSICAL PLANNING AND HOUSING
HEALTH
OTHER SECTORS
TOTAL
PUBLIC
PRIVATE
THIRD PLAN
SECOND PLAN
FIRST PLAN

Part II

SOCIAL INFRASTRUCTURE

CHAPTER XII

EDUCATION AND TRAINING

The concept of education as a vital national investment and a major determinant of the nation's economic growth underlay the recommendations of the Commission on National Education and of the Second Five-Year Plan. The Third Plan takes even greater recognition of this concept of education and has kept in view the following basic and inter-related objectives of educational planning in the country:

(i) to provide an educational system which would facilitate transition into an era of science and technology, promote political, social and economic development and bring the country's spiritual and cultural heritage into harmony with the contemporary world;

(ii) to provide the youth of the country with conditions conducive to the full-fledged development of their individual capacities and character;

(iii) to raise the quality of education at all levels so that it may properly fulfil its nation building tasks.

I. PROGRESS DURING THE SECOND PLAN

2. Education has always been considered significant as a social obligation. But the importance of human resource development as an essential agent in the socio-economic growth of the country is a concept of comparatively recent origin. Thus the First Plan, while fully recognizing the need of trained manpower, made only a modest financial allocation for Education and Training. Conscious realization of the high positive correlation between educational effort and the growth of the nation was suitably reflected in the rationale of the Second Plan which, in financial terms represents a five-fold increase over the First.

3. The Second Plan identified certain growing points in various levels and types of Education and decided to develop them with a view to rectify some deficiencies in the supply of trained manpower. It selected technical education at all levels together with secondary and higher education for special attention. In all these fields significant advances were registered during the Plan period.

4. The two Engineering Colleges at Lahore and Dacca were developed into Universities. They have increased enrolment and have introduced post-graduate studies in civil, mechanical, and electrical engineering. Three new Engineering Colleges were established. The annual intake of students at the degree level has been raised to 1,630. At the technicians level 11 new-polytechnic/technical institutes were established. A number of new technologies were introduced. The annual

admissions at the diploma level rose to 4,100. The two Provincial Directorates of Technical Education were reorganized and strengthened.

5. In the primary sector, two million additional children were brought under instruction during this period. In secondary education, improvements in physical facilities were made and many new schools were established. The target of 430,000 for enrolment at this stage stipulated in the Second Plan, was fully achieved and significant curricular improvements were initiated by the introduction of diversified courses like industrial arts, agriculture, business education and home economics in a number of Pilot and Model secondary schools. Prescription of the study of science as a compulsory subject at the high school stage, constituted a significant move and increasing number of schools are in the process of providing laboratories and teachers for the purpose. At the higher secondary stage too, a marked increase in enrolment has taken place but the facilities available for scientific and technological studies are still unable to meet the heavy demands.

6. At the higher education level also, significant advances have been made in the provision of physical facilities inclusive of buildings, scientific equipments, laboratories, libraries, study rooms for teachers and other essential amenities. Three new Universities have obtained building-starts. This sector is still in need of qualitative improvement.

7. Besides these growing points, other important measures and reforms were introduced during the Second Plan. *Inter alia*, a comprehensive system of merit scholarships for talented students at all levels of education beyond the free primary stage was introduced and programmes of in-service training for primary and secondary school teachers were started on an institutionalized basis.

8. The Third Plan, too, seeks to identify certain growing points in the educational complex within the framework of its broad strategy and to initiate concentrated efforts at these places. In financial terms, investment in Education will be increased to a figure almost three times that of the Second.

II. STRATEGY OF THE THIRD PLAN

9. The Third Plan will be directed towards a well balanced and integrated development at all levels of education. Externally, the programmes will seek closer consistency with other sectors of national life, and will be geared to the economic needs of the country. They will emphasize practical utility and encourage attitudes of mind conducive to acceptance of change and social progress. Internally they will aim at complementarity and harmony within the education-mix, helping smooth and substantial flow of children and youth from one level to another consistent with individual differences, needs, aspirations and aptitudes, aided by appropriate guidance and supported by suitable scholarships.

10. Quality education will be the keynote of the Third Plan. Vigorous efforts will be made to improve the quality of education at all stages. Experience in developing societies has already shown that in the field of education, emphasis on quality, instead of militating against quantitative expansion, can actually serve to encourage it.

11. Two other crucial concerns of the Third Plan will be widening the base of primary education and greatly increasing the facilities for technical and vocational education. Heavy investment at the primary level is necessary in order to reveal talent and to lay the basis of attitudes of mind essential to development. This will improve the secondary and higher stages of education, which have been recruiting from too narrow a base in the past. In addition it will eventually furnish the necessary expanded inflow into technical and vocational institutions.

12. The expansion of primary education depends, mainly, on three related factors; the prevention of drop-outs, greatly expanded supply of better qualified teachers and better facilities, making the school more attractive to children. The increase in the number of teachers, moreover, must be matched by improvement in their quality if the schools are to reach the desired standards. There are several means of achieving this end—improved initial training, increased inspection and supervision, greater facilities for in-service training and incentives for professional advancement. Above all salary scales have to be improved so that the teachers' emoluments are made commensurate with their status, qualifications and responsibilities. One of the most important steps will be to develop and enlarge a special corps of teachers of teachers.

13. Facilities for secondary education need extension to a realistic size. Expansion is dictated by manpower needs in technological, administrative and auxiliary services during the Fourth Plan period and for the supply of professional and managerial cadres in the Fourth and Fifth Plans. It is also of great importance that children coming up through the expanded primary system should have the opportunity to go on to further schooling. Expansion at secondary level is also necessitated by demands of institutions of higher learning for increased input of students of science. A real bottleneck has been found to exist at the higher secondary stage where a large number of students desiring admission in science classes are denied the opportunity for lack of facilities. Apart from expansion, secondary education is in need of fundamental reorientation of its curriculum. A vigorous campaign needs to be launched for the introduction of diversified courses at the secondary stage and the induction of a large percentage of students into subjects such as industrial arts, agriculture, commerce and home economics. Here some guidance and counselling becomes important for directing students to the most appropriate forms of education, to apprenticeship, to craft training or to the study of science and mathematics consistent with their interests and aptitudes.

14. It is imperative that various educational issues and problems be resolved through empirical research and inductive surveys rather than by dogmatic opinions. Efforts will be made to strengthen and encourage the programme of educational research in both the provinces. For this purpose the research programmes, both basic and applied, of the Institutes of Education and Research and other organizations in this field, will be appropriately strengthened and supported.

15. At the college and university level emphasis must be on raising the quality of education and on expanding the teaching of science and technology. Standards of education are low, graduates seldom attain standards referable to those of the best universities in the world, and the number of students engaged in developmentally vital fields of study is relatively small. The ratio of students engaged in scientific and technical subjects to those studying languages and humanities needs to be raised substantially. Improvement of quality of teachers and teaching must remain a high priority objective, while the scope for more efficient and intensive utilization of existing facilities is fully exploited.

16. The need for technical education at a variety of levels is widely recognized and progress has been more rapid in this field than in any other during the last few years. Nevertheless, a national manpower policy needs to be framed which would attempt to gear different levels and types of vocational training and education to the needs of development. Although some exercises have been undertaken to determine the shortage of trained manpower at various levels, there is further need of detailed analysis of future manpower requirements. Studies of this problem will be carried out during the Third Plan. Subsequent developments will be closely guided by the findings of these manpower studies.

17. With greatly increased enrolments and more diverse opportunities of the Third Plan, the ablest children should be retained in the educational system, and guided into the types of education most suited to their talents and leading to the most suitable employment openings. For this purpose an effective system of educational and occupational guidance will be developed, and a massive programme of scholarships will help the talented youth to flow into appropriate branches of the educational system.

18. The programmes are not rigid and static. As more experience and knowledge is gained during the course of the Plan period and detailed information is made available through research and study, the programmes will grow and develop in accordance with the needs of the economy and society.

III. PROGRAMME FOR THE THIRD PLAN

19. The following paragraphs discuss the programmes and policies at various levels of education and training. Targets as well as the nature and scope of schemes

have been formulated after taking into account the viewpoints of the relevant agencies of the Provincial and Central Governments. The proposed allocations by main educational stages are given in Table 1. A comparative picture of the relative priorities of education at various levels in the First, Second and Third Plans, is presented in Table 2. Table 3 shows the approximate recurring liabilities of the Central and Provincial Governments. Financial allocations set out in Tables 1 and 3 are not the only funds being made available for expenditure on human resource development in the Third Plan period. Educational and training programmes relating to Agriculture, Health, Industry and Commerce, Transport and Communications, Housing, Manpower and Social Welfare are included in their respective sectoral programmes. Physical targets of the Education sector are indicated in Table 5.

Primary Education

20. The objective of the Third Plan is greatly to increase enrolment at the primary level in order that universal primary education may be achieved as early as possible and certainly within the Perspective Plan period. To this end it would be necessary to increase the total enrolment figure from about 45 per cent in 1965 to approximately 70 per cent of the primary school age group in 1970. In absolute figures, this will involve an additional enrolment of 5.8 million by 1970, 3.0 million in East Pakistan and 2.8 million in West Pakistan. To bring this about the Plan envisages that 18,500 existing primary schools in East Pakistan will be improved and 4,000 new ones will be opened. In West Pakistan, where owing to sparse population, schools have a much smaller number of students and teachers, about 42,500 new schools will have to be set up.

21. As a first step it is proposed to offer opportunities for enrolment in Class I to between 75 and 85 per cent of the nation's children. However, in view of the high rate of drop-out enrolment figures, either for the whole age group or for Class I are not a very reliable guide to the total educational situation. More important than this increase in enrolment in Class I will be an increase in retention of the children so that 50 per cent of the appropriate age group are in Class V, instead of less than 20 per cent as at present. To achieve this very significant and ambitious increase will constitute a challenge to the Provincial and Local authorities, who will have to take the most vigorous measures to reduce the rate of drop-out by improving the quality of education offered. The possibility of increased enrolment will mainly depend on a greatly increased registration of girls. This will require a widespread change of social attitudes.

22. The situation regarding primary school enrolment differs markedly between East and West Pakistan. In East Pakistan there is a much higher initial enrolment in Class I, followed by a greater rate of drop-out. In order to reach the overall enrolment proportions in Class I and V, about 85 per cent of the age

group, which is very near the present figures, would be enrolled in Class I in East Pakistan and the main effort would be directed to reducing the rate of drop-out. In West Pakistan the aim would be to increase actual enrolment in Class I to 75 per cent of the age group, with simultaneous emphasis on retention.

23. One of the most crucial factors influencing the rate of drop-out has been identified as the quality of education. This means, in the first place, that the most energetic steps must be taken to improve the quality of the teachers. These measures are considered in the section on Teacher Education. At the same time the teaching profession will have to be made more attractive by improving salary scales and other conditions of work so that suitable persons are drawn to it and retained in greater numbers. It will be equally necessary to ameliorate the physical conditions of schools so that they are more attractive to children. The problems of drop-out, which are not only educational but also economic and social, will be subjected to careful study and review.

24. The objective of upgrading the quality of primary education demands that, in the first instance, emphasis be placed on improving the syllabi of institutions responsible for the training of teachers, and on the development of new techniques and materials for teaching. Curriculum development is very important at the primary level. The child's experiences have to be given a practical orientation. The overall objectives of accelerating productivity in the economy have to be kept in view. It has to be remembered, that at this stage in a child's development, foundations are laid of attitudes towards life and environment. Special emphasis is to be placed on laying the basis for scientific thinking. It is most important that children are helped to understand the meaning of socio-economic development and the possibilities of the rational control of environment. As a large percentage of primary school children do not, as yet, go on to secondary education, it will also be necessary to introduce elementary agriculture and craft courses indigenous to particular localities in Classes IV and V in selected primary schools.

25. The central problem in developing primary education is that of finance. Expansion at this stage necessarily involves substantial increase in recurring costs. Special efforts by Government as well as local communities will be needed to raise the necessary funds if the effect of the heavy developmental expenditure of the Third Plan is not to be critically negated. Several suggestions have been made for generation of additional funds. Some of these have already been tried out and experience shows that it is a difficult task to raise additional funds either through local taxation or in the shape of direct contributions from the local communities. Provincial Governments have, therefore, to explore minutely every possible source of additional finances and make more vigorous and sustained efforts to raise local resources for primary education.

Middle or Junior High Stage

26. Education at the Junior High Stage consisting of Classes VI, VII and VIII, is eventually to be made compulsory for all children during the perspective plan period. The Third Plan programmes will include expansion of educational facilities to accommodate 960,000 additional children (400,000 in East Pakistan and 560,000 in West Pakistan). This will increase the enrolment in these classes to 2.0 million (0.8 million in East Pakistan and 1.2 million in West Pakistan) in 1970.

27. Curriculum at this level needs careful attention. At this stage, the school curriculum has also to be expanded to include diversified subjects, craft work and prevocational courses, which the children have to be encouraged to explore. Special attention should be paid to recent developments in the teaching of Mathematics and Science. It is also necessary to improve the general quality of education at this stage so as to reduce the rate of drop-outs.

Secondary Education

28. Education at the secondary level comprises two stages at present: (*a*) Secondary consisting of Classes IX and X and (*b*) Higher Secondary or Intermediate comprising Classes XI and XII.

29. Secondary education is of utmost practical importance to Pakistan. While the expanded primary education provides the nation with a wider base of talent, it is at the secondary stage that this talent acquires the education and training through which it may contribute to the economic and social life of the country. Primary education creates a potential, and higher education caters for the specialist. It is secondary education that provides the largest number of people the requisite skills and intellectual ability to meet the immediate and multifarious needs of a rapidly expanding economy. This stage of education should therefore be looked upon mainly as terminal rather than merely preparatory to university. It is for this reason that secondary education in Pakistan is undergoing something of a revolution. It is changing in form, from one which was predominantly literary and general, to one which is largely geared to the needs of industry, agriculture, commerce and government. This shift is the essence of one of the major recommendations of the Commission on National Education. The country can ill afford to see secondary school leavers pursuing subjects of study for which there is no economic demand, and thus creating a class of educated unemployed.

30. The teaching of science and mathematics should consequently receive very strong emphasis during the Third Plan. The content and quality of education, in these subjects, need fundamental reorientation. The matter has to receive urgent attention and demands immediate provision of up-to-date laboratories, libraries, science equipment, books and other miscellaneous requirements.

31. The dearth of suitably educated and trained teachers of science and diversified electives is very acute. Determined and continuous efforts are needed to increase their supply. Some measures to tackle the problem are indicated in the section on Teacher Education.

32. High priority at this level will be accorded to the rapid introduction and development of a diversified curriculum. Two or more electives will be introduced in a majority of secondary schools, from the wide range of subjects in industrial arts, agriculture, commerce, home economics, and other prevocational, mechanical and technological disciplines. The district high school will be the focal centre of this development. It should be designed to be fully comprehensive, with adequate residential facilities, offering the widest possible choices in the elective subjects mentioned above, fully equipped with laboratories, library, science equipment, workshops, apparatus, machinery, other teaching aids and qualified teachers, thus serving as a model for other high schools in the district and drawing resident students from the areas where particular electives are not available.

33. The on-going scheme of 'Pilot' secondary schools will be extended. New schools will be added and those already in the process of development will be strengthened and further improved. It is necessary that these relatively well-equipped schools should have highly qualified staff. The scheme aims at developing a selected number of schools, with an expanded and diversified curriculum, to serve as model for others.

34. The development of comprehensive schools, with emphasis on diversified courses, besides science and mathematics, will be undertaken at an accelerated pace. The district headquarters' schools and the Pilot secondary schools mentioned above would serve as models for the purpose. A phased programme for the improvement of all the existing high schools, government as well as non-government, on these lines, over the Perspective Plan period, has to be initiated immediately. A sufficiently large number of schools will be developed in the Third Plan, with a view to bring about the desired shift from the traditional to the modern pattern of secondary education.

35. Support will be forthcoming for the existing residential schools to extend their facilities and to improve the quality of their instruction. A limited number of new residential schools will receive assistance as justified in the public interest.

36. The introduction of diversified electives and emphasis on the study of science and mathematics are not the only improvements envisaged for secondary schools. In many schools the existing facilities are totally inadequate. These schools will be identified and helped. In particular there is serious shortage of library amenities. Books are in short supply and many of them are old and outdated. Side reading materials and juvenile literature of appropriate quality is lacking.

There is little regular flow of good literature suitable for the needs of the age group concerned or their teachers. During the Third Plan vigorous efforts will be made to improve this situation.

37. A very important feature of all these programmes, whose keynote is diversity and choice, is the development of an effective guidance system to assist children in making suitable decisions at the time of electing subjects for study or seeking openings for employment. This guidance and counselling programme will be based on the use of standardized tests of intelligence, interest and aptitudes of children and young people at different ages and class levels.

38. The traditional administrative set up needs fundamental change. Modernization of secondary curriculum necessitates a major shift in favour of specialized professional supervision. Current practices and procedures of "inspection" have to be basically reorientated and streamlined. Supervisory teams of highly qualified subject specialists would be needed for the purpose, and the matter will receive immediate attention.

Higher Secondary/Intermediate Education

39. Higher secondary education is of crucial importance both as a terminal stage and as preparatory to higher and professional studies. Its size, content and quality deserve serious attention.

40. There are several deficiencies at this stage of studies that need to be attended to. Institutions of higher learning complain about the low scholastic achievement of their entrants. Studies in science in particular, cause concern at this level. The number of students offering scientific subjects is small both in relation to those pursuing language and humanities courses and to the national manpower needs. The reasons for this are obvious. The institutions are currently short of adequate physical facilities and qualified teachers of science. The quality of the end-product of this stage needs upgrading in knowledge and skills and especially in the habit of scientific thinking.

41. A sizable programme of expansion and improvement of science teaching at the intermediate level is, therefore, a clear imperative. In initiating these measures due attention will be paid to the provision of optimum requirements of laboratories, science equipment, teaching aids, books and library services. It will also be ensured that teachers for this stage of studies possess not only a thorough mastery of their subjects of specialization but also insights in adolescent psychology, laws of learning and appropriate instructional methods.

Middle and Secondary Education Programme

42. The Plan provides for the improvement/expansion of 500 junior high schools in East Pakistan and upgrading of 2,000 primary schools to middle schools

in West Pakistan. Craft course, which has been prescribed as a compulsory subject, will be introduced in all the schools at the lower secondary stage in both the Provinces. In East Pakistan, 1,000 high schools will be improved and expanded by providing better accommodation and well-equipped science laboratories and libraries, and by the introduction of diversified courses in a number of selected schools; 45 new Government high schools, 6 residential model schools, and 3 pre-cadet schools will be established; and, the existing 36 pilot secondary schools will be converted into comprehensive schools. In West Pakistan 950 schools will be improved and expanded by providing additional class-rooms, laboratories, libraries, scientific equipment, hostels and by introduction of diversified courses. Out of these about 200 will be intensively improved by providing all possible physical amenities, and introducing courses in industrial arts, agriculture, business education and home economics. Substantial improvements will also be made in other 500 schools while limited improvements will be made in the remaining ones. In addition, 100 middle schools will be upgraded to high schools, 50 government and 50 non-government new high schools will be opened and 40 comprehensive schools with residential accommodation and facilities for full range of diversified courses will be established. At the higher secondary stage, all the existing intermediate colleges will be improved and expanded and 15 Government intermediate colleges will be established in East Pakistan. In West Pakistan 50 intermediate colleges will be improved and expanded and 35 new Government and 35 non-Government intermediate colleges will be established. Special emphasis will be laid in these institutions on the teaching of science for which adequate provision for scientific equipment and laboratories will be made.

Teacher Education

43. It is a commonplace that no educational system is better than its average teacher. The improvement and expansion of the school system depends squarely upon the quality and number of teachers. If education is to play an effective role in the social and economic growth of the nation, the teacher and his education must receive the highest priority.

44. The level of teaching in our primary and secondary schools is not always as high as might be wished. As the number of teachers increases to meet the rapid growth of enrolment, the standard of instruction will tend to be depressed still further. During the course of the Third Plan, the number of primary teachers must rise from approximately 184,000 in 1965 to at least 350,000 in 1970. The magnitude of the task can be judged from the fact that in 1970 the number of teachers required to be trained will be twice as many as in 1965. Teachers for Classes V-VIII and for secondary education in general will number 35,000 for new programmes alone. Among these, moreover, there must be considerable proportion of graduate teachers of science subjects, and specialists in industrial arts, agriculture, home economics and business education. But there must not only be more teachers;

there must be better teachers. High rates of drop-out and failure in examinations have been ascribed to low standards of instruction at the school stage. Unless steps are taken to improve the quality of teachers, the great educational breakthrough envisaged by the increased allocations of the Third Plan will be a breakthrough in numbers only, which might well constitute a drag on the economy.

45. Teacher training institutions, in general, need improved physical facilities, better type of teachers and improved curriculum. Commitment of a much greater effort, in terms of physical, financial and human resources is a clear necessity, if academic standards are to be upgraded. In particular, Primary Training Institutes and Normal Schools deserve close attention. Expansion in training facilities for primary school teachers is necessary both in order to meet the increased demands of education at this level and to create capacity for the annual requirements of teacher supply over the perspective plan period after the current bulge in demand has levelled out in course of time. Thus the existing institutions will be enlarged and new ones will be opened. New institutions will be carefully planned to accomplish high academic achievement. Standards of the existing ones will be upgraded.

46. The long-term objective is to raise the minimum educational qualifications of primary school teachers. In the Third Plan, however, we shall have to rest content with existing prescribed qualifications, namely, matriculation with one year's training. But it would be necessary to enforce high quality standards. The curricular content of the academic programmes of institutions preparing primary school teachers will be improved. Their access to the latest professional knowledge will be ensured. Care must be taken that special emphasis is laid on instruction in the psychology of the particular age group that will be entrusted to these teachers, on laws of learning and on the use of findings of modern psychology in a school situation. Curricular improvement should be a continuous process and its annual evaluation should be built into the system.

47. A vigorous programme of in-service training will be initiated for the existing teachers. Arrangements will be made for them to attend specially designed courses, for a period of at least three months, preferably followed by further training in the succeeding year. During the interval they will work in schools under supervision of master teachers. Successful completion of the in-service training should be accompanied by suitable increments in salary. No building programme is contemplated for this enterprise. The activity could be located at existing educational buildings, particularly during Summer Vacations, with part of the programme overlapping the term time of these institutions if necessary. Care should be taken to expose these teachers to the latest knowledge both in subject matter disciplines and professional areas, especially such subjects as mentioned in paragraph 46.

48. To vitalize this important segment of our educational system, it is necessary to upgrade the academic standards of teacher preparation at all levels. To achieve this objective it would be essential, *inter alia*, to develop a corps of highly trained teachers of teachers. Facilities of training and research at the Institutes of Education and other colleges or departments imparting post-graduate instruction will be intensified for this purpose. It should be ensured that this group consists of adequate number of specialists in primary and secondary education.

49. It is necessary that education, as a subject of study, receives due recognition and finds a suitable place at appropriate levels. The subject of education in its present day connotation is not confined to methodology. It is a comprehensive term inclusive of a number of disciplines and themes, especially those relating to the behavioural sciences, aimed at a better understanding and knowledge of the young growing human being. Universities should explore the possibility of introducing Education either as an elective subject or an area of specialization for Honours at the Degree stage. The Boards of Secondary Education, too, should investigate a fitting position for the subject in the curriculum for Classes XI and XII. It has been suggested that an area of emphasis ought to be created for the purpose, at the higher secondary level, analogous to pre-medical and pre-engineering studies.

50. There is a critical shortage of teachers of science subjects. To remedy this, facilities for teaching of science at the higher secondary stage, which is considered to be a real bottleneck, will have to be greatly expanded and improved as pointed out earlier. Similar steps have also to be undertaken at college and university levels. The supply of science teachers cannot be increased by a fiat. In a market economy—such as that of Pakistan—only an increased financial inducement can call forth science teachers of the quality and in the numbers required by the country. There is, therefore, a strong case for establishing differentials between the pay of teachers of science and arts subjects.

51. Teachers of prevocational subjects at the lower secondary stage and diversified courses at the secondary level are in short supply. As the development of comprehensive schools is one of the major objectives of the Third Plan, special measures will be adopted to increase the supply of teachers of these subjects. The existing facilities for the training of teachers in industrial arts, agriculture, business education and home economics courses will be expanded. The Plan provides for the expansion of facilities at the two Institutes of Education and Research at Lahore and Dacca which have recently introduced programmes for the training of teachers of teachers in industrial arts and business education at the Master's degree level. The Plan also provides for the expansion of the existing facilities for the training of teachers of technological subjects for polytechnics and technical institutes. B.Sc. and M.Sc. courses in technical teacher education will also be instituted.

52. It is recognized that the teacher is always a student. Teachers should be encouraged by all manner of means to improve themselves professionally. Such professional improvement should be accompanied by suitable increments in salary. Some of them should be sent on duty to work for a degree. In order to promote the continued professional education of secondary school teachers, Education Extension Centres should be strengthened. Courses offered by them currently are considered too short in duration to achieve suitable and lasting effects. It is considered that their courses should normally be of at least 3 months' duration, and that their programmes should have close co-ordination and articulation with the syllabi of other institutions concerned with teacher education, so that some of the credits obtained at the Education Extension Centres might count towards the work of their degrees. The Extension Centres will have to be staffed appropriately for the purpose. In-service training for the teachers of secondary schools should be compulsory, and they should be required to undergo such training at least once in 5 years.

53. The syllabi of B.Ed. and B.A. Hons. in Education degrees will be constantly reviewed by the relevant Boards of Studies, with a view to modernize them and to incorporate the latest knowledge in professional and academic disciplines. Special measures will also be essential to ensure that the quality of teaching in scientific subjects is raised. It will be necessary to expose science teachers, both pre-service and in-service, to the newest methods and concepts of science and science teaching.

54. Research must play an important role in the development of every aspect of education. The two Institutes at Dacca and Lahore should be more fully and effectively utilized for research and training of research workers. They should be encouraged to develop doctoral programmes as soon as possible. Their research activities should be further expanded, intensified and supported. In research high priority is to be accorded to the development and standardization of objective tests, such as those of intelligence, and scholastic achievement in various subjects, stratified for different age and grade level children, besides batteries of aptitude tests. Some other measures for the expansion of research activities have been suggested in the section on Curriculum Development. Educational research should be the normal function of a selected number of teacher training institutions. Furthermore, it is highly desirable to set up two more post-graduate institutions, one in each province, in the Third Plan period, which should specialize in teaching and research at that level.

55. In East Pakistan, the existing 47 primary training institutes will be further improved and expanded and some new ones will be established, the 5 existing teachers training colleges will be improved and expanded and one new one will be established. In West Pakistan, 40 normal schools will be expanded, 15 new

normal schools and 100 normal training units will be established; three new teacher training colleges will be opened; existing facilities for the training of teachers of vocational subjects will be intensified and expanded; and, research units will be added at 3 training colleges and 15 normal schools. The Education Extension Centres and the Institutes of Education and Research in both the Provinces will be further developed to meet the varied requirements of teacher education. Separate colleges will be established in both the Provinces for the training of teachers of polytechnic and technical institutes. The Plan also provides for the holding of summer seminars for the teachers of colleges and universities to familiarize them with the latest techniques of teaching and developments in their fields of specialization.

Technical Education

56. Technical education is of vital importance in a developing country, and the Second Plan assigned a high priority to it. The Third Plan envisages a much larger programme in technical education both in size and range. It is imperative that a major breakthrough be achieved at all levels of technical education during this period. This will constitute the necessary shift from traditional subjects of study to practical and essential skills. Without this, the country's long-term social and economic objectives will founder for lack of skilled personnel needed to carry out the great variety of tasks upon which development depends.

57. The two Engineering Universities at Dacca and Lahore will be developed for the promotion of post-graduate studies and research. In East Pakistan, in addition to the completion of the Engineering Colleges at Rajshahi and Chittagong, an Engineering College at Khulna will be established. In West Pakistan, the Engineering Colleges at Karachi and Peshawar will be strengthened, the Engineering College at Hyderabad will be completed and another new Engineering College will be established. The programme is so designed as to increase the annual intake capacity of the Engineering Colleges (including the Engineering Universities) from 1,630 in 1965 (480 in East Pakistan and 1,150 in West Pakistan) to 3,300 in 1970 (1,500 in East Pakistan and 1,800 in West Pakistan). The total output of engineers during the period 1965-70 will be about 6,000 (2,200 in East Pakistan and 3,800 in West Pakistan).

58. The need of engineers with different specializations varies with the nature and extent of industrialization in the country. As industrialization goes apace, greater attention will have to be paid to the diversification of technological studies. At the same time, a minimum number of places in different departments of engineering in our teaching institutions will have to be fixed keeping in view specific future requirements. From the experience of other countries it is clear that eventually emphasis will have to be diverted from the present preponderance of civil engineering. In order to meet long range goals, many new branches of engineering

studies will have to be instituted, such as those in industrial structure, petroleum, aeronautical engineering power systems and transmission, ceramics technology and textile processes.

59. The rapid expansion of engineering education requires a large number of teachers during the Third and subsequent Plans. In order to attract the best talent the teaching career will have to be made more attractive than other vocations in the engineering profession.

60. In order to meet the urgent demand for technical information services it is proposed to establish institutes of technological development in the two Universities of Engineering at Dacca and Lahore. The tasks of these institutes will be to provide unbiased services for technical information, to collaborate with practising engineers in the design of plant and equipment within the country, to assist management and planners in decision making related to technological development through the medium of operations research.

61. Facilities for the training of technicians (diploma holders) will be strengthened and expanded. In East Pakistan, the 13 existing technical institutes will be expanded into polytechnic institutes, the three existing polytechnic institutes will be further developed, and, two new polytechnic and three monotechnic institutes will be established. In West Pakistan, the on-going projects for the establishment of eight polytechnic institutes and one monotechnic institute will be completed, 13 new polytechnic institutes (ten of which, to start with, will provide courses in two technologies only) and one new monotechnic institute will be established, and 8 existing polytechnics and one monotechnic institute will be expanded. The existing polytechnic institutes provide courses in civil, electrical, mechanical, chemical, diesel and automobile, drafting and design, power, radio and electronics textile, glass and ceramics, and leather technologies. New technologies will be introduced in gas, sugar, paper, farm, power station, production, body building, survey, tea, instrument, dress design, product design, hotel management, food processing and preservation and composing, engraving and lithography. It is estimated that the annual intake capacity of the polytechnic and technical institutes will increase from 4,100 in 1965 (1,900 in East Pakistan and 2,200 in West Pakistan) to 14,000 in 1970 (7,000 in East Pakistan and 7,000 in West Pakistan). The total output of technicians during 1965-70 will be 23,000 (11,000 in East Pakistan and 12,000 in West Pakistan).

62. For the students of polytechnics and other technical institutions practical training in life-like situations is highly necessary. In future, therefore, greater emphasis will be given to practical training, preferably in co-operation with private agencies, as an integral part of the curriculum. For this purpose Advisory Committees will be set up for each polytechnic, on which industry and other employing authorities will be fully represented.

63. Here again, as at other levels of education, consideration of quality should receive high priority and every conceivable step should be taken for the purpose. It is necessary to reiterate that maintaining high standards would require high quality teachers. It has been stated that good teachers are in short supply at the polytechnic level. This needs to be attended to vigorously during the Third Plan. The teachers at the polytechnic stage, besides possessing high quality skills in their specialization, should also have a broad educational and professional preparation.

64. The Second Plan provided for establishing a number of commercial institutes in both the Provinces in order to meet the demand for trained personnel in office skills and in shorthand, typography, book-keeping, transport, marketing, costing and similar subjects. The number of such institutes is expected to be 16 in East Pakistan and 21 in West Pakistan by 1965. The possibility of establishing these commercial institutes as departments of polytechnics rather than proliferating these institutions separately will be explored. The institutes, whether established as independent organisations or placed in polytechnics, will need consolidation and expansion during the Third Plan.

65. The curriculum and syllabi for second level workers, for which the commercial institutes are catering need to be carefully reviewed in light of the practical requirements of industry, business and government. For planning, development and supervision of this type of education it would be necessary to strengthen the education departments with properly qualified staff.

66. Vocational training to produce skilled workers has so far been the responsibility of the Labour and the Industries Departments. The Education Department in East Pakistan, however, has recently taken over the responsibility for running vocational schools. These schools are in addition to the technical training centres being run by the Labour Department. In West Pakistan, trade and craft courses are still being provided mostly by the Labour and Industries Departments. It is proposed to take over the vocational schools from the Industries Department and to improve and expand them. Some new vocational schools too, will be opened by the Education Department in West Pakistan as pilot projects. It is expected that the annual intake capacity of the vocational schools will increase from 8,300 in 1965 (3,300 in East Pakistan and 5,000 in West Pakistan) to 50,000 in 1970 (25,000 in East Pakistan and 25,000 in West Pakistan). The total output of craftsmen will be about 110,000 (50,000 in East Pakistan and 60,000 in West Pakistan) during 1965-70. In addition there will be skilled personnel produced by the technical training centres under the Labour Departments and the various industrial establishments and private concerns which provide informal or on-the-job training.

67. One of the main problems of education at the trade and craft level is that responsibility is dispersed among so many agencies. Steps have been taken during the Second Plan to co-ordinate and systematize some of this training, but the situation still leaves much to be desired. Types and standards vary and there is little comparability of qualifications. Nor is there any relationship between national manpower requirements and the training carried out by various agencies. During the Third Plan, efforts will be made to streamline the administrative framework responsible for craft training. Some training, however, is more suitably carried out by private industry than in government institutions. Industry should therefore be encouraged by various incentives to engage in in-service training of employees. Where appropriate, the qualifications obtained from this training should be standardized. The persons trained in this way, and by Departments of Labour, will considerably increase the number of trained craftsmen available by the end of the Plan period. The development of craft and trade training should be in direct conformity with the country's need for skilled labour of various types.

68. Programmes of instruction in the evening will be greatly emphasized in the Third Plan. Polytechnics, technical training institutes, vocational schools and commercial institutes will all start or expand their evening classes. Workshops in the diversified secondary schools should also be utilized for evening classes in vocational subjects. These measures are calculated considerably to increase output from available facilities and to enable those who are working during the day to earn certificates or diplomas by attending evening classes. Possibilities of supplementing these programmes by the introduction of correspondence and sandwich courses should be explored, and a beginning made on an experimental basis.

69. The needs of the rural areas are to receive special attention in many ways during the Third Plan. The skills of workers and craftsmen in the remote villages and rural areas are of low calibre and have to be upgraded. One way in which this can be done is to institute a system of mobile workshops on wheels or in boats, suitably equipped and manned, which should travel from place to place with halts of various duration at different places, where they should provide informal or on-the-job training to the rural skilled and semi-skilled craftsmen or unskilled labour. This programme can be undertaken in conjunction with polytechnics or vocational schools. In this way these institutions can start having an impact on the rural communities. Details will be worked out and concrete scheme formulated.

Higher Education

70. It is to the institutions of higher learning that the country looks for leadership in various walks of national life. The country so poorly supplied with facilities for higher education during the early years of independence, has been able to make substantial progress in this field.

71. But education at this level has several weaknesses. Firstly, the number of students studying science and technology is not adequate for the rising needs of the country. Secondly, the quality of academic achievement leaves a great deal to be desired and our end-product is not yet referable to that of the best institutions abroad. Although suitable expansion of places in higher education will be necessary during the Third Plan, greater emphasis will be laid on improving the quality of existing institutions and on expanding and strengthening the teaching of science and other technological subjects that are of direct relevance to Pakistan's development efforts. At the same time maximum use of the existing physical facilities will be ensured by such measures as extended working days and more intensive utilization of space and equipment.

72. The quality of colleges in Pakistan and the facilities they provide are very uneven. Some institutions are undoubtedly very good and enjoy high repute and prestige. But generally speaking the courses of instruction could well be upgraded and academic facilities improved. Some colleges are inordinately crowded. Many do not possess adequate libraries, laboratories or study rooms for students. Quite a few institutions do not provide instruction in science at all and those that do, have only limited seats. The faculties are not as highly qualified as might be desired. Study rooms for staff are not available in many colleges. In such institutions teachers have little opportunity or incentive to carry out personal study or research. These matters have to be attended to. But in view of the number of institutions involved, measures to improve colleges have to be taken selectively.

73. At the moment the majority of students enrol in non-science subjects and most institutions concentrate on them because of the high cost of science teaching and paucity of teachers. Major efforts in the Third Plan will be directed towards improving and expanding facilities for the teaching of scientific disciplines. Laboratories will be added to and modernized. Up-to-date science apparatus, equipment, books and periodical research literature will be provided. Teachers of science subjects will be provided every opportunity to improve themselves professionally. Adequate number of foreign training facilities and scholarships will be made available to them to study in selected universities overseas. Opportunities for vacation and evening courses at the universities will be arranged. Substantial scholarship inducements to students to take courses in science and developmentally relevant subjects will be offered.

74. The library is recognized as the heart of an educational institution. Libraries in many colleges are in a sad state. Much greater effort must be channelled in this direction. Libraries should be stocked with sufficient quantity of up-to-date books, journals, research periodicals and other reading materials. Well qualified and trained librarians should be employed. There ought to be sufficient number of individual places in the libraries or attached study halls for the students

to sit undisturbed and pursue their enquiries. Access to books and reading materials must be quick and easy and the open shelf system should be introduced. Libraries and study halls should be available to students after the college working hours.

75. Existing colleges need additional buildings and staff to equalize educational opportunity and to improve instructional efficiency. Most of them are currently short of residential accommodation. This situation tends to put a limit to opportunities for higher education, available to talented students hailing from small urban and rural localities. Hostel accommodation will be provided or suitably expanded at such institutions. In some colleges, particularly those reputed for high academic standards, enrolment of students has increased at an unprecedented rate. Their standards cannot be maintained, much less improved, unless corresponding increase in physical facilities, teaching staff and other amenities takes place simultaneously.

76. Constant efforts are necessary for improvement of educational standards. Due attention has to be paid, *inter alia*, to tutorials, individual supervision and guidance, periodic tests and internal but objective evaluation of student achievement. Studies up to Honours courses should be established in selected colleges.

77. It has been generally accepted that the system of affiliation is not conducive to good education, and that the number of colleges affiliated to a distant university should be restricted. It is desirable, therefore, eventually to establish a few more universities of the unitary type or on Aligarh pattern making it possible for the teachers to give a more effective education to their students. In order to prepare the ground for the establishment of such universities subsequently some of the good existing colleges have to be specially developed. The possibility will be explored during the Third Plan of giving Charters to a few selected colleges of high academic standards enabling them to award their own degrees.

78. As discussed earlier, consolidation of institutions of higher education will remain the principal concern. Improvement of degree colleges will be brought about by providing them with adequate academic and residential accommodation, scientific equipment, libraries and reading rooms. These programmes will cover, 63 colleges in East Pakistan and 50 colleges in West Pakistan. To meet the increased demand of education, especially in science subjects, capacities of the existing colleges will be greatly expanded in East Pakistan. In West Pakistan the programme, provides for the expansion of the existing colleges, introduction of B.Sc. classes in 25 of them and for the establishment of 5 new government degree colleges with facilities for B.Sc. Pass and Honours courses for about 1,000 students each.

Universities

79. Improvement of quality, expansion of facilities for study and research in scientific and technological disciplines and consolidation in general will be

the keynotes of the development of universities in the Third Plan. Striving for excellence must permeate every aspect of university work. It is essential that post-graduate study and research should be strengthened considerably with a view determinedly to take the end-product of a university to the frontiers of knowledge in the chosen subjects of study and to produce creative thinkers.

80. In order to achieve this, all those measures listed under colleges and some more will apply to universities. Libraries and laboratories will be improved in the manner indicated earlier. Development and expansion of facilities for scientific and technological disciplines will receive the strongest emphasis. Universities will be encouraged to raise the proportion of students pursuing advanced courses and research in these subjects.

81. At this level, more than any place else, considerations of quality dictate that the closest possible attention be devoted to individual supervision, tutorials and seminar discussions, encouragement of critical and scientific thinking, zeal for enquiry and periodic tests and objective evaluation of student achievement. In fact universities have to take increasingly bold and imaginative measures to improve quality of instruction. While doing so, some of the traditional procedures and practices that hamstring progress in this direction will have to be abandoned.

82. The effectiveness of all these measures depends entirely on the competence of university teachers themselves. Every possible step must be taken to attract the best qualified teachers to the universities, to keep them there and to ensure that they have the means to continue their studies and research. Provision is made in the Plan for several steps conducive to this end. Research facilities of all sorts should be improved. Scholarships and foreign training facilities, especially in science subjects should be made freely available. Provision should be made for periodic study leave. A certain number of additional or associate professorships, readerships and fellowships should be established to which eminent young scholars may be appointed in accordance with their merit rather than mere seniority in service. Universities must aim at recruiting for their faculties scholars who have creative ability. They may have to talent scout for the purpose, offer financial and other incentives and suitably honour and reward creative work.

83. Development oriented research requires the collaboration of workers in several disciplines. Improved articulation between basic and applied sciences is necessary. An Institute of Applied Research provides an appropriate setting for multi-disciplinary research and studies. Such Institutes will be established in selected universities. The focus of studies at these Institutes will be matters which are of crucial significance for accelerating the pace of development. These Institutes will co-operate with each other and with the wider academic world, in the prosecution of their research and studies.

84. Duplication of highly specialized areas of study and research should, as far as possible, be avoided, especially within each Province. Certain highly specialized disciplines, especially in science, require very costly equipment and highly trained staff. When the number of students is small, it would be more conducive to efficiency and economy if the universities decide to identify and divide such areas of study.

85. For better co-ordination of university education and systematization of government aid, it is necessary that a high powered University Grants Commission should be immediately established.

86. Education at the University level will be improved, strengthened and expanded by providing the existing universities with appropriate physical facilities, scientific equipment, libraries, reading rooms, and residential accommodation for students and staff. Programmes of teaching and research at the universities will be substantially improved and strengthened and Ph.D. Courses will be started in a number of disciplines. In East Pakistan where only two universities exist at present 2 new universities will be established. The project for the establishment of a university at Islamabad, work on which has already been initiated, will be completed. Other universities will be set up in West Pakistan in accordance with need. Provision has also been made for the University Grants Commission.

Scholarships

87. The Second Plan provided for the introduction of a comprehensive system of merit scholarships for talented students at all levels beyond the stage of free primary education. These scholarships are awarded on merit on the completion of Classes V, VIII, X, XII and at the college/university level. These schemes of scholarships will be further expanded and supported during the Third Plan period. The purpose of the programme is to open up every career to students with talent irrespective of their socio-economic background. In a country where education is not widespread the merit scholarships programme is an important method of securing equality of opportunity and social mobility.

88. Special scholarship schemes will be established in order to encourage science education from Class VI right up to the post-graduate level, with a view to motivate a majority of students to pursue subjects in the basic sciences, rather than in traditional studies. Similarly, special scholarships will be instituted for girl students at all levels of education with a view to giving a fillip to female education.

89. The Third Plan will also include a systematic and well co-ordinated programme of foreign training of teaching staff. In addition students of outstanding merit will be selected at the completion of their degree courses or post-graduate studies and sent abroad for further specialization in their respective disciplines in order to serve the teaching profession on return.

90. The on-going scheme of scholarships for the children of Class II, III and IV employees of the Central Government will continue to be supported and will be expanded.

Adult Education

91. The high rate of adult illiteracy and the realization that it places tremendous barriers in the way of economic, social and political progress, have in the past prompted many efforts towards adult education. These efforts, generally speaking, were unrelated to the economic and practical needs of illiterate adults and tended to restrict themselves to mere literacy. Bearing in mind the massive size of the illiterate population, the inability to achieve results of any significance is not surprising.

92. The problem is staggering in its magnitude and nebulous in nature. It could well engage the total physical and financial resources of the education sector without being satisfactorily solved. It has, therefore, to be handled with circumspection, a sense of realism and well-thought-out strategy. While directing an effort in this direction certain basic premises have to be kept in mind. Firstly, a special organization will be needed to take responsibility for a vast enterprise like this. Secondly, adult literacy is not enough by any manner of means. Any fruitful undertaking in this field has also to aim at adult education. Mere ability to read and write is of minimal value unless there is worthwhile material on which to exercise it, and literacy unguided by education does not engender increased productivity or improved social behaviour. Thirdly, in consequence, large scale production of reading material in simple language related to the vocational and every day needs of adult literates is necessary, if education at this level is to produce worthwhile social and economic results. The literate adult should be able to lay his hands upon simple manuals connected with his work or other materials related to his needs and problems. Fourthly, efforts should be concentrated in the first instance on those segments of the labour force where education would pay the highest dividends. These would consist mainly of industrial and craft workers and agriculturists in certain selected rural areas. The range of effort in adult education will be steadily widened.

93. During the Third Plan period some pilot projects of adult education of intensive nature will be taken up experimentally. Suitable organizations will be set up to undertake the operations in accordance with the recommendations of the National Study Group on Adult Education which produced a comprehensive report on the subject, after deliberations towards the end of 1964.

Promotion of the Arts, Culture and Sports

94. Arts and cultural centres such as museums, art galleries, national monuments, libraries, music centres, are the media through which the cultural advance-

ment of a country is reflected. These centres, if developed as living organic institutions and run efficiently can have great educative value, as it is through them that the younger generations can be informed of their national achievements and heritage. Sports, too, play an important role in developing healthy habits and desirable attitudes.

95. In the past some attention has been given to the development of social and cultural centres as well as to the development of sports. The importance of these activities is being increasingly recognised now and steps are being taken to systematically develop the cultural centres and organize sports activities both on regional and national basis. Compared to previous Plans it is expected that the programmes in these spheres in the Third Plan will be much larger in size and more varied in nature. It is expected that private organizations supplemented by continued Government support will ensure the development of these activities at an appropriate scale.

National Awareness

96. Some projects of national importance have been identified and given due emphasis in the proposed programme for the Third Plan. The on-going projects at Islamabad, namely, the establishment of a post-graduate university, a national museum, a national library, and an art council, and the development of national archives of Pakistan, will be completed during the Third Plan period. The work of the two Boards for the development of Urdu and Bengali languages will be continued and deficiencies in scientific and technical literature will be further removed through translations and original publications. The informational and statistical services of the Central Bureau of Education will be developed. Steps will be taken to strengthen the research, co-ordinative, training and advisory functions of the Central Statistical Office. A number of outstanding Pakistani scholars studying or working abroad will be selected and posted as National Research Scholars or Fellows in different Pakistani universities. Further archaeological excavations will be undertaken and an enlarged programme for the development, modernization and improvement of museums will be initiated. Museums of science and technology and the Pakistan Academy of Sciences will receive support. The National Book Centre, the Liaquat National Library, and the Central Secretariat Library will be developed, and, a Central National Library at Dacca will be established. Provisions have also been made for grants to various national bodies and cultural organizations. The educational requirements of Azad Kashmir and Northern Areas will receive adequate attention.

Miscellaneous

A—Female Education

97. It has been estimated that in the last year of the Second Plan period the ratio of female to male students is 1:3, 1:6 and 1:7 at primary, secondary and higher

education levels respectively. The incidence of illiteracy in the female population has been found by the census of 1961 to be much higher than that in the male population. The situation is highly unsatisfactory, and will have a serious long-term effect on Pakistan's social and economic development. The nation can ill afford to neglect the education of half of its population.

98. Inducements, in the shape of sizable scholarship programmes for girls have been indicated in the relevant section. But the problem cannot be entirely solved through these measures. It stems from deep-seated social attitudes and will only yield to equally radical changes. Leadership of the highest calibre and unremitting efforts will be required to meet this national challenge. The education departments and professional educators will have to enlist the co-operation of women's organizations in the country like APWA, and the Federation of University Women and other social and humanitarian workers and rural and urban community development organizations, for the purpose. It has been suggested that eventually all primary schools, boys' and girls' alike, should be staffed with women teachers with appropriate education and training. It has also been suggested that schools at the primary level should be common for boys and girls. These are issues that have to be raised and answered during the next few years.

B—Rote-Memory and Learning

99. The nation's education at all levels is still hampered by practices that lead to memorization of factual data rather than real learning. Educators are fully conscious of the gravity of the issue. The report of the Commission on National Education (1959) has suggested several devices that could be conducive to the eradication of the defect. But the matter requires a radical change in what goes on in a class-room. Every teacher from primary to college, will have to make conscious efforts and the teaching-learning situations in the class-room will have to be basically reformed. This re-emphasizes the improvement of the teacher. Real learning is not something that the teacher can hand over to a pupil or do for him. It involves the whole pupil, his perceiving, thinking, feeling and doing. It is based upon his past experiences, present readiness and future goals and purposes. The real criterion of learning is change in behaviour.

100. These considerations clearly indicate that the education authorities should determinedly take stock of the existing situation and evolve comprehensive schemes to bring about the desired revolution in the class-room practices and procedures.

101. The examination system reflects the prevalent methods of teaching and learning. The value and appropriateness of the current examination system has already been questioned. Unfair practices have been mounting during the last decade. This archaic system is conducive to laziness of the pupils over lengthy periods of time, is expensive and is known to encourage memorization.

102. Early development of objective standardized tests of scholastic achievement for various subjects and classes has been urged in the relevant section. But the whole question of student evaluation has to be subjected to close and scientific study, along with its essential implications for school and college practices and teacher preparation. Increased reliance and trust has to be placed on the teacher, who in his turn has to shoulder more responsibility. The Education Departments of the two provinces will study these questions scientifically.

C—Curriculum Development

103. Frequent references to curriculum development have been made in relevant sections. This is an important professional concern and should engage serious attention. A curriculum is not something rigid, fixed and immutable. Nor is a single pattern curriculum suitable for all types of children living in various social environments and coming from different socio-economic backgrounds. The curriculum has to be child centred. Individual differences are to be identified and catered for. The pupil has to be motivated to learn. The pupil as a whole has to be involved in the learning processes. The curriculum of separate subjects would be inefficient if it did not help them to relate themselves to their world and to solve the problems of living. At the same time a curriculum of integrated subjects would be inefficient if it did not ensure development of skills and use of factual data.

104. Some organizations for curriculum development are in the making. But it would be a mistake to divorce a continuing activity like this from the teacher training institutions. Research and experimentation in curriculum development should be regular responsibility of all training colleges, Institutes of Education, and Primary Teacher Training Institutes/Normal Schools, together with schools and colleges themselves. The initiative of the teacher, or teacher trainer, and experimentation and change in curricular matters is to be encouraged and sought after. The Education Departments will develop schemes with a view to initiate or intensify their efforts.

D—Audio-Visual Aids and other new Teaching Devices

105. The value of audio-visual aids of various types is fully recognized. Use of maps, charts, illustrations, pictorial or model representations, films, film strips and other projected materials are a great help in real learning processes. Some institutions are currently making effective use of certain simple devices. But it is necessary that a massive and comprehensive effort be mounted so that all educational institutions are induced and enabled to use the available audio-visual materials.

106. The Education Departments should develop appropriate and practicable schemes for which financial support would be forthcoming. Most of the visual aids can be obtained cheaply, or if not they can be copied

or improvised with little expense with local materials. Some projection apparatus is costly, but one film or film-strip projector or overhead projector can be used by many schools jointly. Similarly one film library well stocked with appropriate films, film-strips, slides, etc., can service a whole series of schools and colleges. Moreover, a large variety of films and film-strips on topics of science and mathematics and series of graded lessons on physical and natural sciences and mathematics, and documentaries of all types, for use of pupils at different levels of the educational ladder, are readily available from abroad and these can be used right-away. Initially only films on social sciences or other cultural subjects will have to be developed within the country.

107. Schools broadcasts have existed for some years but are still extremely limited in scope and time. This is a grave desideratum, for radio receiving sets are or could be widely available in schools and homes, in urban and rural communities alike. Immediate steps ought to be taken to develop educational broadcasts, appropriate for class-room use as well as those for individual or group listening.

108. The use of television as a medium of mass communication, popular information and specialized work in schools is now widespread in many countries. It can be a tremendously powerful instrument for education. As outstanding teachers are in short supply especially in the field of science and technology, TV can spread their benefit far and wide if educational programmes are efficiently used. The need for special training of radio and TV teachers is, however, recognized.

109. The country is also lagging in new devices for use of learning processes. It is necessary that programmed instruction and materials in many subject and for different levels, be quickly developed in the country. Another device of great potential value is that of team teaching. Experiments in the adaptation of this technique to local conditions should be carried out.

E—Physical Education

110. A person develops as a whole and education cannot be confined to mental and intellectual improvement. Socio-emotional needs of children and youth have to be indentified and catered for at different levels in an appropriate manner. In particular physical education has to receive due attention.

111. Physical education of youth has long suffered neglect. But during the Second Plan period it has attracted some effort. These efforts are to be intensified during the Third Plan. Simple rules for health and personal hygiene should be taught in early childhood. Special courses and experiences are to be devised keeping in view the requirements at specific growth levels of children and youth. Above all it is necessary that at secondary, higher secondary, college and university levels maximum possible facilities should be provided to both male and female students to play games and engage in physical sports in accordance with their inclinations and capacities.

112. Currently our educational institutions suffer from lack of suitable facilities for the purpose. Playgrounds should be made available wherever possible. In congested urban localities gymnasia are more easily obtained. Swimming pools could also be available especially in co-operation with communities. It is recognized that provision of more space is costly and on occasion well nigh impossible. But many games and sports really do not require very much of space or costly sports gear. Basketball, volleyball, badminton and squash are examples. Indoor gymnasia can furnish many types of sports.

113. Regular physical exercise is considered a sound and basic part of educational responsibility. It is very important that the maximum number of enrolled students, if not all, should regularly have some type of suitable physical exercise followed by a shower and brush up. Schemes for new or improved institutions should contain provision for appropriate facilities for sport.

F—Juvenile Literature

114. Reading materials available to students at all levels of education are currently very limited. Most students are left with officially prescribed text-books alone. These text-books themselves need improvement and modernization. But besides these a student should have easy access to a wide range of attractive and interesting reading materials.

115. Whatever books for children are extant, are written by adults guessing at children's language and concepts. Vocabulary lists stratified for various age and grade level children have not yet been scientifically formulated, in any language in the country. Research required to produce these lists should be undertaken immediately, for it is on the basis of these graded lists of vocabulary that juvenile literature can be produced.

116. Production of such literature is a very specialized job. Schemes aiming at the improved and increased production of such literature should be prepared.

G—Rural and Backward Areas

117. Abridgement of the developmental gap between urban and rural communities is important for the overall educational development of the nation. The pronounced hiatus between their respective facilities for education and consequent supply of skilled persons has to be closed. It is therefore necessary that not only officially defined backward areas but rural communities in general in both Provinces should receive special attention in the provision of appropriate facilities. Special assistance is to be given to such communities, particularly for primary education. Talent in rural communities is to be spotted and the scheme of merit scholarships is to be activated to ensure that deserving children and young people are helped to go up to the highest rungs of the educational ladder in accordance with their interests, aptitudes, and deserts.

H—Education, Trained Manpower and Economic Development

118. A constantly recurring theme of the education programme for the Third Plan is the need to gear education to the needs of the country's developing economy. This is a complex task requiring, if it is to be carried out with the greatest effect, a considerable understanding of the socio-technical role of education in creating conditions within which economic growth occurs, as well as an accurate analysis of the present and projected supply of skilled labour and of the outputs of the educational system.

119. During the Third Plan projections will be made of the numbers, levels of education (primary, secondary, college, etc.), and areas (technological, non-technological) of skilled labour needed to meet the requirements of the Third Plan and the Perspective Plan as a whole. The output of the Educational system will be estimated, and the changes necessary in order to meet the manpower requirements will be calculated. At the same time a more general analysis of the role of education in the development of Pakistan ,social and political as well as economic, will be carried out.

IV. EDUCATION AND NATIONAL GROWTH

120. National growth in all its complexities depends largely on human resources. Education therefore assumes a crucial role. The extent and nature of national growth is largely determined by the number and character of available manpower, their attitudes, skills and capacities. The education system as a vital social institution and instrument for moulding and developing manpower resources, acts and reacts strongly on the economic, social and cultural growth of a nation. The educational strategy should be designed to accelerate socio-economic advancement.

121. Programmes of the Third Plan are designed to fulfil certain clearly perceived objectives. The base of primary education will be expanded greatly. Diversity and choice is to be the keynote of secondary curriculum. Study of science and mathematics will be emphasized at all levels. Technical education will receive highest attention. The objective of improvement of quality at all stages of education will be relentlessly pursued. Supply of teachers for all levels and types of education, adequate not only in numbers but also in quality is perceived as a principal concern. Achievement of real learning rather than rote-memory is to become the overall objective. These planks of policy, together with the desired shift of emphasis from traditional subjects of study to more useful and practical skills, supported by a large scheme of scholarships available at all stages of education, are calculated to give the sorely needed New Look to the educational system in the country.

122. Some of the targets are ambitious. Others will put a tremendous strain upon the leadership in the society in general and on the educational profession in particular. Realization of these targets will call for radical change of attitudes in many quarters and intensive interest in the important field of human resource development. Failure to accomplish these tasks will jeopardise the objectives of economic development. If the efforts succeed the nation will have achieved, at the end of the Third Plan period, not only the substance and direction of social and economic progress but will also have taken the first great strides towards an educational resurgence essential for self-sustained economic growth and self-regenerating social and cultural development.

Plan Publicity

123. Linked with the question of gearing education to the needs of the country's development is the problem of educating public opinion about the objectives and problems of economic growth, arousing enthusiasm and support for developmental effort and mobilising resources for the achievement of these goals. It is essential that the public should know the duties and responsibilities in their respective fields of endeavour and should be willing to shoulder them. In the modern world of democracy and mass communication publicity is no longer a mere adjunct of any venture in public welfare or any project requiring public understanding, co-operation and participation. It is an integral part of the promotion of such a venture or project.

124. The publicity targets would be achieved through the harnessing of various publicity media at home and abroad. These media would include radio television, films, newspapers, professional periodicals, books, pamphlets, lectures and seminars, exhibitions and models. While the objectives of home publicity would be to generate strong public support for the Plan the object of foreign publicity would be to encourage greater interest and understanding in our economic progress and problems, particularly in countries rendering assistance to Pakistan.

125. A certain percentage of the entire plan expenditure has therefore been set aside for this publicity effort. For breakdown of expenditure see table 4.

126. In the initial stages it is expected that about 60 per cent of the expenditure would be on Audio visual publicity including feature films, documentary film, T.V. films, purchase of T.V. time in foreign countries and Radio programmes, about 7 per cent would be on Newspaper supplements and articles, about 8 per cent on Exhibitions and Models and the remaining about 25 per cent on booklets, brochures, professional journals, maps, graphs, seminars, etc. etc. The nature and composition of the programme in subsequent years will be determined after carefully evaluating the impact of the publicity arranged during the first two years.

TABLE I

ALLOCATIONS UNDER EDUCATION AND TRAINING SECTOR DURING THE THIRD PLAN

(Million Rs.)

Sub-Sector	East Pakistan	West Pakistan	Central Government	Total
1. Elementary Education:				
(*a*) Primary	320	200	—	520
(*b*) Middle/Junior High	125	80	—	205
2. Secondary Education	185	225	—	410
3. Teacher Education	60	78	—	138
4. Technical Education	360	277	—	637
5. Colleges	60	45	—	105*
6. Universities	180	110	53	343
7. Scholarships	70	115	13	198
8. Madrasah Education	15	—	—	15
9. Social and cultural activities	15	—	68	83
10. Special Projects	10	—	6	16
11. Special Areas	—	20	10	30
12. Training in Public Administration	2	2	6	10
13. Publicity Schemes	—	—	20	20
Total for Public Sector:	1,402	1,152	176	2,730
14. Private Sector Investment	200	100	—	300
Grand Total:	1,602	1,252	176	3,030

*This figure does not include expenditure on Intermediate Colleges.

TABLE 2

COMPARISON OF RELATIVE PRIORITIES ASSIGNED TO VARIOUS LEVELS OF EDUCATION DURING FIRST, SECOND AND THIRD PLANS

(Million Rs.)

Sub-Sectors	First Plan (Actual)		Second Plan (Estimated Actual)		Third Plan Allocation	
	Amount	%	Amount	%	Amount	%
Primary education	74	20	101	9	520	20
Secondary education	72	19	183	17	615	23
Teacher education	9	2	70	6	138	5
Technical education	22	6	260	24	637	23
Higher education	100	26	280	25	448	15
Scholarships	5	1	93	8	198	8
Miscellaneous	98	26	115	11	174	6
Total:	380*	100	1,102	100	2,730	100

*In terms of the concept of the Second Plan, the expenditure amounts to only Rs. 230 million.

TABLE 3

PROJECTED INCREASE IN RECURRING EXPENDITURE DURING THE THIRD PLAN PERIOD

(Million Rs.)

Sub-Sector	East Pakistan	West Pakistan	Central Government	Total
Primary education	200	315	—	515
Secondary education	185	125	—	310
Teacher education	10	8	—	18
Technical education	110	25	—	135
Higher education	42	38	12	92
Miscellaneous	9	38	16	63
Total:	556	549	28	1,133

Note: 1—Figures indicated against Secondary education in Tables 2 & 3 include expenditure on middle/junior high, high and higher secondary stages.

2—In 1969/70 the recurring expenditure of the proposed programmes is likely to be Rs. 388 million out of which the shares of East Pakistan, West Pakistan and Centre are estimated at Rs. 184.5 million, Rs. 195.0 million and Rs. 8.5 million respectively.

TABLE 4

DETAILS OF EXPENDITURE ON PLAN PUBLICITY

(Million Rs.)

Year	Home Publicity	Foreign Publicity	Total (of columns 2 & 3)	Foreign Exchange Component
1965-66	2.49	0.83	3.32	1.00
1966-67	2.60	1.00	3.60	1.05
1967-68	2.70	1.20	3.90	1.21
1968-69	2.75	1.30	4.05	1.31
1969-70	2.75	1.40	4.15	1.41
1969-70 (Fourth Plan Publicity)	0.47	5.00	0.97	0.60
Total	13.76	6.23	20.00	6.58

TABLE 5

PHYSICAL TARGETS OF THE THIRD FIVE YEAR PLAN

(Education and Training)

Items	Unit	Bench-mark production in 1964-65			Third Plan Target in 1969-70		
		E. Pak.	W. Pak.	Total	E. Pak.	W. Pak.	Total
1	2	3	4	5	6	7	8
[illegible]rimary Schools ...	Number	27,000	35,000	62,000	31,000	77,500	108,500
2. Improvement of Primary Schools ...	Number	7,500	1,600	9,100	26,000	21,600	47,600
3. Children at Primary Stage. ...	Million	4.20	3.10	7.30	7.20	5.90	13.10
4. Annual Production of Primary Teachers ...	Number	8,600	10,400	19,000	20,000	20,000	40,000
5. Children at Lower Secondary Stage ...	Million	0.40	0.64	1.04	0.80	1.20	2.00
6. Annual admission into Vocational Courses ...	Number	3,300	5,000	8,300	25,000	25,000	50,000
7. Annual admission into Polytechnics (technicians) ...	,,	1,900	2,200	4,100	7,000	7,000	14,000
8. Annual admission into Engineering Colleges and Universities ...	,,	480	1,150	1,630	1,500	1,800	3,300
9. Engineering Colleges and Universities ...	,,	2	5	7	4	6	10

CHAPTER XIII

MANPOWER TRAINING AND LABOUR

The country's economic and social development requires a sound policy of resources mobilization. This applies both to financial and physical, particularly to human resources. The proper utilization of manpower is both a social challenge and an economic requirement. While the availability of a sufficiently skilled labour force is a pre-requisite of economic growth, the gainful employment of the entire labour force is a pre-requisite of social health. Policies geared to the social and economic objectives of full employment, to be reached well before the end of the Perspective Plan, will have a bearing on the recruitment, training and placement of labour, and on the provision of safety, security and welfare for the participants in the economic production process.

The Employment Situation

2. In spite of the growth of the economy during the decade between 1950 and 1960, and the structural changes in the economy which sprang from it, a deterioration of the employment situation could not be avoided. The rapid growth of population and the influx of migrants from India after Independence caused considerable increase in the number of the unemployed and also resulted in a higher degree of underemployment in the rural areas. A continuous flow of labour to the urban centres, mitigating to some extent the underemployment in rural areas resulted in a rapid rise of unemployment in cities and towns.

3. A very high degree of disguised and potential underemployment in agriculture, traditional manufacturing, construction and petty trade and services is indicated by the low levels of labour productivity in these sectors and has been proved by successive Manpower Surveys and by the results of the 1961 Census of Population. It is difficult to establish its real magnitude due to the inherent difficulties of measuring employment in a largely traditional society. Nevertheless it is clear that the employment problem is of a serious nature and proportion.

4. On the basis of assumptions about normal hours worked and about numbers of hours required for specific crops and for livestock, it is estimated that in the agricultural sector about 6.3 million manyears of labour were not utilized in 1961. In addition, there is unemployment and underemployment in the non-agricultural sector. For the terminal year of the Second Plan, it is estimated that approximately 7.6 million manyears, or about 20 per cent of the labour force, were not used for any productive purpose.

5. The labour market suffers from many imperfections. Even in urban areas there is little chance that skills are applied where these are most urgently required, or that skilled labour is paid according to its scarcity value. This has negative consequences both for the efficiency with which scarce capital and labour are used, and for the wage and salary structure. The development in the field of manpower planning and budgeting has been far too slow, resulting in many specific shortages of labour and inadequate coordination between manpower requirements and education and training programmes to meet these. As programmes of education and training must take time before they produce men and women with the required skills, there are likely to be serious bottlenecks in the implementation of development programmes during the next decade.

Progress during the Second Plan

6. Accelerated economic growth after 1960 arrested the trend of increasing labour wastage, without diminishing the absolute level of unemployment. For the first time it was possible to absorb the entire increase of the labour force. This performance during the Second Plan points the way to future reductions in the absolute level of unemployment. It is estimated that the labour force increased over the Second Plan period by about 3.6 million persons. Against this number of new entrants, about 1.8 million new jobs were created in the non-agricultural sector of the economy and a similar number of equivalent manyears of employment were created in agriculture including the Rural Works Programme.

Objectives for the Third Plan

7. It is difficult to make an accurate forecast of the effects of various factors influencing the rate of addition to the labour force. But an increase of the labour force by about 4.2 million persons during the Third Plan period would be a reasonable projection. The breakdown by Provinces is given in the following table:

Labour Force, 1965 and 1970

(In million man-years)

	1965	1970	Increase during the Third Plan
East Pakistan	21.0	23.6	2.6
West Pakistan	16.2	17.8	1.6
Total ...	37.2	41.4	4.2

The Third Plan programme implies an increase of employment by 5.5 million manyears which ties in with the phasing of the long-term policy for full employment of the Perspective Plan. For the first time, the Plan will reduce the absolute number of the unemployed, reducing the percentage of the labour force which is not economically active from the present 20 to about 15 in 1970.

8. The expansion of employment is the best way of providing social security and a wider and more equitable distribution of the national income. Towards the attainment of the employment target as well as the target of economic growth the Third Plan contains a wide variety of programmes for the development of skills, improvement of vocational guidance and employment counselling, improved utilization of skilled manpower and enforcement of statutory and welfare measures. Special attention is given to protection and regulation of wages and earnings so as to accomplish a reasonable rise in wages consistent with gains in labour productivity, provision of social security and housing. The Plan attaches great importance to the achievement and maintenance of industrial peace and security for the employed labour force.

EMPLOYMENT POTENTIAL OF THE THIRD PLAN

9. The total employment likely to be generated by the proposed investments between 1965-66 and 1969-70 is estimated to be 5.5 million, the sectorwise details of which are as follows:

Estimates of Additional Employment by the end of 1969-70

Sl. No.	Sector/Sub-sector	Employment in Thousand Man-years		
		East Pakistan	West Pakistan	Total
1.	Agriculture	1,360	1,140	2,500
2.	Mining	Negligible	Negligible	Negligible
3.	Manufacturing:			
	(i) Large and Medium-scale	285	255	540
	(ii) Small-scale	180	180	360
	(iii) Manufacture of non-Plan construction and non-construction material	25	25	50
	Total Manufacturing	490	460	950
4.	Construction:			
	(i) Physical Planning and Housing	100	80	180
	(ii) Construction in Water and Power	50	55	105
	(iii) Construction in Transport and Communication	85	50	135
	(iv) Works Programme*	85	85	170
	(v) Miscellaneous construction other than (i) to (iv) above	50	30	80
	Total Construction	370	300	670
5.	Trade and Services**	750	630	1,380
	Total all Sectors	2,970	2,530	5,500
		3.0 million	2.5 million	5.5 million

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* Taking also into account the indirect employment generated by the Works Programme, (which is included against item 5 above) the total employment impact of Works Programme is estimated around 400,000 man-years.

** Includes: (i) Trade, finance, insurance and real estate; (ii) public utility operation services; (iii) transportation, storage and communication services; and (iv) other services.

10. The increase in agricultural employment is estimated on account of additions to the cultivated area, improvement of the existing cultivated area, greater intensity of cultivation and increased labour requirements for livestock during the Third Plan period. Additional labour will be required for improved water supplies, increased inputs of fertilizers, use of pesticides and changed rice technology. The estimate for non-agricultural employment is based on current and projected technology. In some industries like petro-chemicals and steel, it is necessary to use capital-intensive techniques, whereas in certain others, like activities involving large-scale construction and earth work, more labour intensive techniques can be used without sacrificing overall efficiency in production. The adoption of labour intensive techniques has not been significant because of the widespread Western influence through foreign consultants and training of Pakistani engineers and technicians in Western institutions. Also, labour intensive techniques require more managerial and organizational skills, which presently are scarce. If deliberate measures are adopted to enforce methods to make the maximum use of available manpower resources, it may be possible to exceed the target of 5.5 million job opportunities. This would require an intensive research programme to develop non-western labour intensive production techniques; it will however require a long time before such techniques can be applied on a sufficiently large scale.

REQUIREMENTS AND OUTPUT OF TRAINED MANPOWER

11. The estimation of manpower requirements presents difficulties as employment data by occupations are scarce specially in the form of staffing patterns and manning tables. To overcome this situation the available material from other countries at comparable stages of development and some limited information for Pakistan has been used in arriving at the manpower supply and demand position for the Third Plan period in some major fields. For the purposes of presentation of requirements and output by occupations in a summary form, four categories are distinguished: (i) degree level and above, which can be understood with reference to recognised degrees; (ii) diploma level—a training course of three years or more after high school or equivalent basic educational qualifications; (iii) certificate level—a training course of less than three years after high school or equivalent qualifications; and (iv) below certificate level—a training course of varying durations without basic education of high school or equivalent level. The fourth category is less precisely defined than the others.

12. Notwithstanding the lack of precise information, estimates for certain fields can be given of requirements and outputs during the Third Plan. It must, however, be kept in mind, that the data presented here only show additional requirements and gross output. The existing deficits at the end of the Second Plan, which in some cases may be sizable, are not taken into account. The data also incorporate a degree of substitution between required and available skills, *i.e.*, in many

cases lower qualified people do the work which should be the responsibility of persons with higher training. Any error in the data presented below should be assumed to be in the direction of underestimating the shortages.

13. At the degree level, the largest part of the requirements falls in the education sector, followed by accountants and persons with a commercial degree, followed next by engineers. Total output over the Plan period is estimated at a considerably lower figure, and it is expected that the education sector, particularly technical education will suffer most of all. In the engineering sector probably less than half of the additional requirements will be met by qualified degree holders. The following table gives some orders of magnitude.

Estimated Additional Requirements and Output of Degree holders during the Third Plan

	Additional Requirements	Estimated Output	Deficit (—)
Engineers	13,100	6,000	—7,100
Mathematicians and physical scientists	4,000*	9,550	N.A.
Accountants, commerce degree holders, etc.	N.A.	16,500	N.A.
Agriculture degree holders etc.	5,300	4,700	—600
Physicians and surgeons	4,200†	4,200	—
Teachers	20,000	N.A.	N.A.

* Known requirements.

† Covers all additional public sector requirements and a small increase in the private sector.

14. The deficits shown here will in a majority of cases be filled by use of lower qualified employees. In the manufacturing sector this will affect productivity and in the education sector the quality of teaching.

15. At the diploma level, the main shortfall is expected with regard to engineers. Requirements are estimated at 37,200, output however will probably be only 26,600*. In the field of accountancy, commerce and banking also a tight market may exist, but no figures on requirements are available which could be compared with the estimated output of 2,800 diploma holders.

16. At the certificate and below-certificate level data are available only for engineering. Total requirements, estimated at 330,000, leave a wide gap in comparison with an output of about 125,000*. The output estimates include all regular training institutes, formal apprenticeship programmes in public autonomous bodies, and 64 private employing establishments in both Provinces. Excluded are the regular training institutions of the WAPDAs, the Railways, Karachi Shipyard, Civil Aviation, Pakistan International Airlines and Broadcasting, which have set

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* Includes output of private training institutions and apprenticeship programmes.

up training programmes to meet their own personnel requirements. Still, the gap between estimated requirements and output remains very large. This calls for considerable strengthening of in-service and on-the-job training programmes, better organization of work, provision of proper incentives and better management.

17. In addition to quantitative shortages, there are considerable deficiencies in the quality of skilled manpower. A special study undertaken by the Planning Commission revealed that technical personnel generally lack in (1) practical training and field work; (2) knowledge of up-to-date production techniques; (3) knowledge of labour problems. The reported reasons for these drawbacks are: (1) inadequate attention to practical training; (2) poorly equipped machineshops and laboratories in most training institutions; (3) shortage of qualified teachers; (4) lack of coordination between training institutions and industrial requirments; (5) utilization of technical personnel on non-technical assignments; and(6) unattractive terms of service.

18. The measures which should be adopted to improve the quality of trained manpower can be summarized as follows: (1) more emphasis on practical training; (2) provision of modern scientific laboratories; (3) frequent reconsideration of curriculae of training institutions, in consultation with employers; (4) systematic in-service and on-the-job training in a practical manner; (5) training of more and better technical teachers by way of refresher courses; (6) expansion of programmes for foreign technical training; (7) improvement in the terms and conditions of service of technical personnel. These measures, even if vigorously implemented, will not altogether solve the quality problems within the Third Plan period, but will go a long way towards meeting the urgent requirements of trained manpower.

19. The shortages of qualified manpower will be overcome by continuing the existing policies, which, for high level manpower, include provision of training both within and outside the country, importing manpower by means of technical assistance, hiring of foreign consultants, and by allowing foreign and national private employing establishments to bring in foreign technicians on the condition that they train local nationals to take their jobs within a reasonable time. In respect of intermediate level personnel the shortages will continue to be overcome by strengthening the arrangements for on-the-job training and through better organization of work, creation of appropriate attitudes and incentives and better management.

20. Special measures for the recruitment of teachers for engineering institutions are necessary because of the overall shortage of engineers. In order to be able to recruit the required number of teachers it is necessary that the teaching career is made comparable with other careers in the profession in respect of pay scales, housing and medical benefits and is also compensated for the fewer promotion prospects by introducing other incentives.

21. For overcoming the shortage of personnel at intermediate level and below, the training institutions under the defence services and those under the employing establishments in the public and semi-public sector should be utilized to meet the general demand as far as may be practicable. At the time of issuing permission for the setting up of new establishments it should be ensured that either the trained manpower is already available, or will become available. Otherwise the new investor should be placed under clear obligation to train the manpower needed for the operation of the plant to be set up. In all cases of importation of foreign technicians, including those under the international technical assistance programmes, the condition should be that the imported expert trains one or more nationals to do the work after his return.

General Recommendations

22. The place of many existing and proposed training institutions imparting training below the certificate level, needs to be appraised with reference to the requirements of a modern and developing economy. The training requirements at this level should, in the long run, be met through the expansion of both formal and informal apprenticeship programmes in modern industrial plants. However, large masses of self-employed skilled workers, mostly in rural areas, carry on their craft on traditional lines and need to be induced to the use of modern methods and techniques of their craft. A tentative proposal which requires further consideration is that some of these training institutions which provide training below the certificate level, be gradually upgraded in order to meet the requirements of skilled workers at the certificate level, and the funds and other resources being used over the remaining institutions may be utilized for the spread of skills among the large masses of self-employed craftsmen along the lines suggested later in this Chapter.

23. The Investment Promotion Bureau administers the policy of achieving progressive Pakistanization of the foreign owned and managed firms. The implementation of this policy needs to be periodically evaluated in consultation with the principal agencies concerned with the development and training of manpower.

24. There is also a great need of bringing about uniform standards and improvement in the quality of instruction. In this respect the following recommendations need to be considered:

(*i*) The different levels of training, their nomenclature, length of training, nature of award, and system of administration should be adequately defined. The standards of training and skills of the large masses of persons, particularly below the certificate level are not suitably defined and standardised. Out of these miscellaneous training arrangements a well defined category needs to be identified and standardised training provided for school leavers after passing the middle class. Thus there may be five levels of training, *i.e.*, degree level, diploma level, post-matric certificate level and post-middle certificate level and skilled and semi-skilled persons below the post-middle certificate level.

(*ii*) The share of responsibility for the training at all the levels needs to be periodically reviewed and apportioned between the public and private sectors and as between on-the-job and regular training institutions. Even the small employing establishments can set up joint training schemes. The question of introduction of "sandwich" or "co-operative" courses for the different levels of training, and the extent to which these courses should be "work based" and "institution based" also needs to be examined.

(*iii*) A trade testing board, or if necessary more than one board, should be set up in consultation with the training authorities to conduct examinations at below diploma level, and award certificates on uniform basis.

(*iv*) Training at all levels including that for professional personnel at degree level, should take place as close as possible to the occupational world so that it is geared to the practical working conditions and needs of the different economic sectors.

(*v*) The teaching programmes in institutions giving training at diploma level, including the polytechnics, require the participation of part-time teachers employed in industrial establishments.

POLICIES AND PROGRAMMES

Manpower Training and Skill Development

25. Programmes of manpower training and skill development are directly related to productivity improvement, but as yet they are in the initial stages. The load for a fully developed training and education programme should be shared by the universities, technical and professional institutions and workers' and employers' organisations. It is also necessary that the need of setting up parallel institutions with the same objectives and programmes as those of the existing institutions should be carefully examined in the light of total training needs of the country.

26. *Management training:* The two existing Management Institutes at Karachi and Dacca should be enabled to improve their training facilities so as to cover training of higher specialists and undertaking of applied research in industrial management and productivity. During the Third Plan period it is also proposed to expand and improve the functions of the National Institute of Labour Administration Training at Karachi.

27. *Workers' education:* The activities of the two Trade Union Training Institutes at Dacca and Karachi under the Workers' Education Society of Pakistan (W.E.S.P.) are handicapped due to financial difficulties, and it may not be possible

for them to put their affairs on self-supporting basis due to the limited resources of trade unions. The affiliation and collaboration of the national trade union organizations on a broad basis with the affairs of the W.E.S.P. is also called for in the interest of promoting healthy trade union growth. It will not be advisable to place the training institutions under the administrative control of the Government. Grant should be provided to assist them in continuing their activities. Moreover, on the pattern of the existing institutes a new institute needs to be set up in the northern part of West Pakistan. The courses of training in trade unionism should also cover methods of trade union participation in economic development programmes and policies.

28. *Skilled labour training centres:* Some important employers in the public sector, like the Karachi Shipyard and the Railways, maintain regular training institutions for imparting training to their apprentices. The possibility of expanding these training facilities, particularly in electrical and mechanical trades, to meet the requirements of industry in general, needs to be investigated. Moreover, the large private employers should be persuaded to set up and finance as many of such new training centres as may be found practicable.

29. The shortage of trained personnel is so acute and the requirements of achieving an accelerated pace of development is so crucial that as long as the industry itself does not fully take the responsibility of training its personnel the Government should continue to take the lead. In order to meet the large demand for skilled labour the number of the training centres under the Provincial Labour Departments will be increased from 2 to 10 in East Pakistan and from 4 to 10 in West Pakistan. Moreover, three out of the existing four centres in West Pakistan will be reorganized and modernized.

30. *Apprenticeship training:* The ultimate goal in the field of apprenticeship training is that employing establishments should be able to produce trained personnel to meet the major part of their demand at certificate level and below, and should take up a fair share of the training at diploma level. As an intermediate step in this direction it is proposed to increase the number of apprenticeship advisory offices from 3 to 7 in East Pakistan, and from 4 to 11 in West Pakistan, and to improve and strengthen the existing offices. In 1962 an Apprenticeship Ordinance was enacted, which has not yet been enforced. The question of its enforcement needs to be reviewed in consultation with the employers.

31. *Training of self-employed artisans:* The existing institutional arrangements for the training of workers are not designed to improve the skills of self-employed artisans (*e.g.*, blacksmiths, carpenters, shoemakers, leather goods makers, workers in general engineering trades, electroplaters), who work on traditional lines. Their productivity is low due to lack of knowledge of elementary modern techniques of their trade or craft. The problems faced in their training arise from the existence

partial infiltration of a foreign technology, which is vastly superior and expensive. The spread of an intermediate industrial technology suited to the requirements of these workers is needed. The elements of this intermediate technology relating to the various crafts will be assembled at one place both from within and outside the country at a central point known as "craftsmen's technological information service" and disseminated by mobile training institutions in rural areas, and evening classes in the existing training institutions in urban areas. Audio-visual aid will play an important role in this programme. The technologies will have two versions, one suited to the needs of rural areas and the other to those of urban areas. The rural programme will cover technologies both with and without the use of electricity.

32. One experimental project under each of the above suggested approach will be set up in each Province. If the experimental projects prove successful their number will be increased.

33. *Training in construction skills:* A programme of rural public works is being undertaken both in East and West Pakistan. There is, however, dearth of elementary construction skills in the country in rural areas, which abound in underemployed and underutilized labour. The urban level of skills are low primarily because of the flow of large masses of unskilled labour from rural to urban areas. Particularly due to shortage of skilled construction workers the government schedule of rate has significantly increased. Training programme for improvement in these skills is required for two categories of workers: (*i*) mason *mistry, baildars,* blacksmiths (moulders), and carpenters; and (*ii*) blacksmiths (general), fitters and welders. Category (*ii*) needs to be covered for mending and repairing the tools and implements used in undertaking public works programme. As in the case of training of the self-employed artisans the audio-visual aids can play an important role in the training programme.

34. The following measures should be undertaken by the Training Wing of the Provincial Labour Directorates for imparting training in the above skills: (*i*) Training of workers with the co-operation of Basic Democracies through the medium of mobile demonstration-*cum*-training workshops; (*ii*) Organizing training-*cum*-development corps/labour co-operatives on voluntary and remunerative basis with the help of Basic Democracies; and (*iii*) Persuading medium size and big contractors to provide training to the labour force they want to employ on large construction works.

35. *Promotion of employment of seafarers:* The total number of active seamen registered with the Shipping Offices (Home) and (Foreign) at the ports of Karachi and Chittagong was about 20,000 in March 1964. The annual absorption at both the ports was between 9,000 and 10,000 resulting in a surplus of about 50 per cent. The employability of seamen will be increased through appropriate improvement

in the existing training programmes as well as by helping them to obtain alternative employment during the period when they are not employed on ships. To begin with, one training ship will be secured for Karachi and one training centre will be set up at the port of Chittagong to train sea-farers belonging to lower categories of maritime labour such as engine room ratings and crews, deck crews, tindals, winchmen, cooks, butlers, etc. There is also need to develop procedure whereby the Shipping Masters elicit the co-operation of employment exchanges so that seamen are able to find alternative jobs during the period of their non-employment on the ships.

36. *Employment and retraining of ex-servicemen:* At present some assistance is given by the employment exchanges to *ex*-servicemen in finding civilian jobs, which has not proved adequate. Specialized arrangements will be made within the Armed Services' Boards at the district level to receive information about released servicemen so that each man's experience and capacities can be evaluated at the time of discharge by that office in relation to the needs of industry. Retraining is necessary for inducting them to civilian occupations, for which one training centre will be set up to train 1,000 persons annually in West Pakistan and another to train 500 in East Pakistan.

37. *Material for workers' education:* A beginning has been made in East Pakistan with the production of twelve documentary films depicting aspects of workers' life, and conditions at work places, etc. Twenty documentary films will be produced in each province during the Third Plan period. But there is need to think in terms of a more comprehensive programme of spreading education not only through audio-visual aids but also through publication of various types of simple and practical manuals, booklets and pamphlets so that workers may better understand the social and economic problems and more actively participate in the adjustment to new patterns of life and work, which is inherent in economic development.

Labour Market Organization

38. *Employment exchanges:* The employment exchanges have remained weak mainly due to their inability to integrate their activities closely with the changing economic life of the country, and their failure to win the confidence of employers and workers. To many a worker the employment exchange is a cheerless place where he has registered for work without expecting to find it, and to many an employer it is an agency of which he has little direct experience. The employment exchanges themselves take a narrow view of their responsibilities and are content to register massive number of unskilled job seekers without concentrating on the problems of the country's labour market. The image of the employment exchanges requires to be improved not only in the eyes of the employers and workers but also in the eyes of the personnel of the employment exchanges themselves.

39. It would not be advisable to spend money on setting up new employment exchanges until the present ones are made to run efficiently. After the existing offices have been improved their number will be increased from 5 to 17 in East Pakistan, and from 15 to 20 in West Pakistan for better coverage of certain geographical areas.

40. The exchanges should undertake employers' visitation programme and determination of technical manpower needs in local areas. Arrangements for providing employment assistance to ex-servicemen need to be effectively co-ordinated with the activities of the Armed Services Board. The Board's district offices can play an important role in the placement of *ex*-servicemen. Similarly, there is need of developing co-ordinated arrangements for seamen with the Shipping Offices (Home) and (Foreign), and for high level personnel with the proposed university placement bureaus and the National Employment Bureau.

41. At least three specialised units need to be set up within the employment exchange system to provide assistance to: (*i*) rural workers in agricultural regions and areas of seasonal employment; (*ii*) port and dock workers; and (*iii*) contract labour employed on construction works. There is also need of setting up specialised arrangements within the universities and other higher places of learning to assist in the problems of high level personnel. Employment counselling is also an important function of the employment exchanges.

42. *Vocational guidance and employment counselling:* Under the Labour and Social Welfare Division a Youth Employment Service is operating, in co-operation with the education authorities, two experimental projects, one each at Dacca and Karachi. Similarly, a beginning has been made at the Education Research Institutes of the Universities of Dacca and Lahore to construct instruments of evaluation which are indigenous to the cultural environment of the country's youth and which are related to the requirements of educational and vocational programmes.

43. A phased-out integrated and comprehensive programme, however, needs to be developed with the ultimate aim of accomplishing the introduction of a small unit for vocational guidance and employment counselling to the placement unit of each employment exchange and the appointment of teacher-counsellers in each secondary and vocational school, polytechnic, college and university, to give group and individual guidance to students, to act as liaison officers with the employment service and to keep cumulative records. In the preparation of a comprehensive and phased-out programme the scale of priorities among its elements should be kept in view, and the experience of the Armed Services, the Departments of Applied Psychology and the Education Research Institutes attached to the Universities of Dacca and Lahore, and of the Central Public Service Commission should be utilised to the extent it is found practicable. It is also necessary that at the earliest opportunity the national, regional and local administrative responsibility for vocational guidance and employment counselling should be defined.

44. *University placement bureaux:* A beginning has been made within some universities and higher places of learning to provide employment assistance to new graduates. There also exist separate arrangements for registration and placement of high level personnel in the Appointment Branches attached to the employment exchanges in large towns. But the high level personnel in most cases, do not care to register with the exchanges.

45. The technical employing establishments both government and private, and the Public Service Commissions find it difficult to locate and recruit the high level scientific and technical personnel, as they are not always looking for a job. In many cases they are immobile. On the other hand in many cases persons qualified in science and technology from Pakistani universities or returning from abroad find it difficult to locate suitable jobs. A large number of well qualified Pakistanis in overseas countries do not return to Pakistan for lack of knowledge of suitable employment opportunities.

46. As an important element in the programme for the solution of the problems of high level personnel the setting up of a national register of high level personnel with the co-operation of professional bodies and universities has been recommended in paragraphs 53 and 54 of this Chapter. As part of the same approach comprehensive arrangements for the registration, referral and placing of persons who qualify from universities and other places of higher learning are required, for which placement bureaus will be set up within these institutions. These bureaus will have contacts, on the one hand with the professional bodies and associations, and on the other with important employers, including the Public Service Commissions.

47. The functions of these bureaus will include: (*i*) provision of vocational guidance and employment counselling to university students as well as other graduates; (*ii*) provision of assistance in finding part time employment for students, and wholetime employment for those who pass out every year; and (*iii*) furnishing particulars of high level manpower who qualify every year from the universities for inclusion in the proposed national register of high level personnel.

48. *Research in rural employment promotion:* There does not exist sufficient knowledge about the organization and method of rural employment promotion, which can serve as a guide in the development of a sound employment policy for rural areas. Two pilot research projects for rural employment promotion will, therefore, be carried out within fairly limited rural areas in each Province over a number of years with a view to develop and demonstrate methods of expanding rural employment opportunities through more labour-intensive types of farming. The project will also aim at the development of activities closely related to agriculture, the promotion of rural industries, the introduction of special rural works programmes, and the encouragement of other promising avenues of employment.

Assistance of union councils in undertaking these projects at the local level will prove valuable. In particular, efforts will be made to find answers to the following main questions:

(*a*) Can a substantial impact on employment and on the creation of improved rural capital assets be achieved without the contribution of important capital resources from outside the pilot project areas?

(*b*) If so, what are the most effective techniques to be applied, and schemes to be undertaken?

(*c*) What are the prospects of and the requirements for applying these tested methods to larger areas?

(*d*) What, if any, follow-up action is considered necessary in the pilot project areas in order to sustain the progress made?

49. At the pre-planning stage, detailed fact-finding surveys of the pilot project areas will be undertaken in order to take stock of their resources, potentialities and needs based principally on the knowledge and information already available. This information will be brought together in a form in which it can readily be used for planning purposes. The fact-finding investigations will also serve the purpose of obtaining bench-mark data concerning present levels of production, income and employment. This is not only necessary for realistic long-term target setting, but also for providing yard-sticks with which to measure progress achieved by the projects.

50. *Research on foreign employment:* The following types of research and advisory functions need to be undertaken by the Labour and Social Welfare Division on a co-ordinated basis:

(*i*) Advising the Government as to what type of labour migration is practicable, having regard to the conditions, trends and outlook of the national and international labour market, repurcussions of migration on economic and social development in this as well as immigration countries, and the effect of migration on migrants themselves.

(*ii*) Providing information regarding the type of jobs available in outside countries and advisory services for prospective migrants.

(*iii*) Advising agencies concerned with educational and training programmes within the country to adapt their programmes to the needs of prospective migrants.

(*iv*) Eliciting the co-operation of immigrant countries and support of the professional associations, and employers' and workers' organizations in those countries to overcome the opposition to newcomers.

(*v*) Providing assistance by arranging recruitment, passage, dispersal of migrants from ports in immigrant countries and making preliminary arrangements for their accommodation.

51. The undertaking of the above functions will involve redefinition of the functions of the National Employment Bureau and Labour Attaches abroad, and strengthening their existing offices and creating Labour Sections in our embassies located in countries where Pakistanis are going or may go in search of employment.

52. The success of programmes and policies for employment promotion depends on a number of factors, some of which extend far beyond national frontiers. It is, therefore, necessary that international forums should continue to be fully utilized for arriving at international agreement to measures for securing sufficiently stable foreign exchange earnings through foreign trade in primary as well as manufactured commodities. The country's national trade union organizations can also play an important role in this connection by eliciting co-operation of the international organizations of workers to secure expansion of exports of manufactures from low wage countries. Possibilities should also be explored at government level for arriving at bilateral agreements for providing overseas employment and training facilities to Pakistanis.

53. *National register of high level personnel:* For the purposes of undertaking the functions stated in paragraphs 44-47 and 50 above, a national register of high level personnel also needs to be built up. The Provincial headquarters of Employment Exchange Organization maintain a register of 85 categories of technical and skilled persons, who are registered by the employment exchanges under the Essential Personnel (Registration) Ordinance, 1948, as amended from time to time. This experience of building up of a national register of Essential Personnel has not been fruitful.

54. A list of high level professional and technical categories should be carefully drawn up, and a national register of high level personnel in those categories should be built up in consultation with and assistance of the Scientific and Technological Research Division of the President's Secretariat. The registration work will require the co-operation of professional bodies, universities and other places of higher learning, and for covering the Pakistanis employed or receiving education abroad, the assistance of Pakistan's foreign missions.

55. *Statistics and evaluation:* There exist some ingredients of a programme of analysis, evaluation and statistics in the Labour and Social Welfare Division and the Central Statistical Office at the Centre, the Provincial Directorates of Labour, and the Provincial Statistical Bureaus. The existing services are widely scattered and not well equipped. A leading task of the units within the Central and Provincial Labour Administrations should be evaluation of the administration of labour laws and operational activities and examination of the methods applied in these

activities with a view to adjustment and adaptation of techniques to different situations. Other tasks include increasing collaboration and liaison with other bodies (*e.g.*, the Central Statistical Office, Provincial Statistical Bureaus etc.), in planning for needed data on all aspects of manpower, labour and employment, to stimulate studies in depth of particular problems by research bodies and to bring about a synthesis of their results. Particular attention needs to be paid to Employment Market Information, wages and related subjects, surveys of agricultural labour, dock labour employment, and contract workers, and evaluation and implementation.

Wage Policies and Incentives

56. An important objective of programmes of economic development is to improve the living standard of the people by raising their real wages, and to provide social security and welfare both on and off the job. The general framework of wage policy proposed for the Third Plan has already been discussed at length in Chapter X. Here only some special problems are touched upon.

57. *Needed improvement for regulating wages:* The existing measures which afford protection to earnings of industrial workers need to be improved and strengthened along the following lines:

(*i*) Rigid enforcement of collective agreements, decisions of industrial courts, and implementation of the wage rates fixed under the Minimum Wages Ordinance, 1961, by the Provincial Governments.

(*ii*) The Provincial Governments should take steps to place on statutory basis the protection afforded to the labour employed by the contractors working for the P.W.D. and M.E.S. and extend this protection to cover the labour employed by the other categories of contractors working for public and semi-public organisations like Railways, Posts and Telegraphs and the State Bank and such other bodies.

(*iii*) The Payment of Wages Act should be amended by the Provincial Governments to cover all workers. The right should be established by law and the worker whom the enforcement machinery is unable to protect should be free to seek remedy from the authorities specially appointed under the law. If he is a member of trade union, his union can act for him.

(*iv*) The level at which the statutory minimum wages have been fixed cover only bare necessaries. The Minimum Wages Board should annually review the minimum wages, and consider the desirability of fixing the statutory minimum wages at a fair level. This would also firm up wages in small industries.

(*v*) As suggested in Chapter X, the Provincial Governments should undertake careful and continuing studies of productivity and establish guidelines for wage increases related to the results of these studies.

58. *Regulation of the payment of bonus:* A high level body comprising the representatives of the Planning Commission, the two Provincial Governments, employers and workers should be set up under the chairmanship of a serving or retired Judge of the Supreme Court or High Court or a senior civil servant for evolving suitable norms and principles for the payment of bonus bearing in view the long-term requirements of the industry, and the interest of workers and the wider national interests of employment promotion through industrial expansion. The examination should, *inter alia,* cover the definition of the term "bonus" in relation to profit and productivity and the principles for computation of such bonus and methods of payment; the determination of the extent to which the quantum of bonus should be influenced by the prevailing level of remuneration and annual profits; determination of conditions under which bonus should be paid establishmentwise, industrywise, and industry-cum-region wise; and finally the formulation of suitable measures to give effect to the proposals.

Promotion of Industrial Peace

59. It can be stated on the basis of available information that the industrial relations situation during the Second Plan period, looked at in the context of the requirements of a developing economy, remained far from satisfactory. This is reflected in the following statistics:

Year	No. of stoppages	No. of workers involved	Man-days lost
1960	42	25,749	78,765
1961	54	26,303	79,191
1962	121	69,482	3,87,847
1963 (Provisional)	221	2,21,613	18,88,167

60. The number of registered trade unions and their membership for the years 1960 to 1963 is as follows:

At the end of the year	Number of unions	Membership
1960	708	3,50,604
1961	721	3,47,287
1962 (Provisional)	815	4,40,294
1963 (Provisional)	830	4,71,466

61. During the Second Plan period the number of trade unions grew keeping pace with the growth of industry. The same is not, however, true of their organization and functions. The movement has continued to be weak. The result has been

that the system of collective agreements based on the principles of bilateral collective bargaining has been unfortunately rare in the country's system of settling industrial disputes.

62. The country's workers are generally not conversant with the statutory provisions and practices of other democratic countries, and are under the impression that they should have the unfettered right to strike at any time. Though the right to declare a strike or lockout is an essential and ultimate safeguard in collective bargaining, even the strongest advocates of this principle would concede that work stoppages are disastrous for the community as a whole, particularly in a developing economy. Whichever party is the victor, both sides (and the consumer too) suffer heavily. It often happens that neither side has the satisfaction of gaining complete victory, and the result is a compromise which could also be reached by negotiations without resort to strike.

63. During the Second Plan period the labour laws governing industrial relations were extensively reviewed and amendments were proposed towards the end of the Second Plan period, but have not yet been enacted. The review and revision of labour laws needs to be expedited. It is also necessary to maintain uniformity in labour laws in the two provinces, particularly in the field of industrial relations.

64. Under the Industrial Disputes Ordinance, 1959, the bulk of all major industries are included in the list of "public utilities" either within the definition, or in the First Schedule of the Ordinance. Industries like paper, card board and pulp, power and industrial alcohol, rubber manufactures, tanned and leather goods and tobacco appear in this Schedule, and are substantive public utilities. All commercial and some minor industrial establishments are left out. The State Bank of Pakistan and the scheduled banks are placed as a third (last) item in the Second Schedule, under which an establishment can be notified as a temporary public utility, if and when necessary. The difference involved in this classification is that public utilities require a fortnight's notice for a lockout or strike, while non-public utilities have to be under the threat of immediate closure of the establishment on the part of management or of lightning strike on the part of the workmen.

65. In the past commercial establishments were, unlike industrial establishments, seldom considered for a notice of strike or lockout because "literate workmen" in commercial establishments were considered to be too respectable for an agitational role. The position has now radically altered in this respect and the literate classes take full advantage of measures like a lightning strike. Moreover, commercial establishments, particularly banks, are now extremely important for a developing economy. There was a strike for several months in a tobacco company in the country, but the factory could be restarted on its even course

thereafter. A bank would have simply succumbed. If a lightning strike is threatened in a bank or any other non-public utility commercial or industrial establishment, some little time must elapse before a notification can issue. A lightning strike does not wait and it is possible that in most cases the remedy may be too late. Once a strike is begun, it can be prohibited only when a reference is made to an Industrial Court and this process also takes its time.

66. The lightning strikes (or lockouts) are a relic of the early confusion of the *laissez faire* policy adopted during the classical period of industrial revolution. It is as much a measure of violence as wholesale dismissal of workmen by the employer or a total or partial lockout. The *laissez faire* policy in respect of labour-management relations has long been dead, and present policy is to regulate labour-management relations mainly by bringing about parties together for negotiations as well as to try to correct the imbalance in the bargaining strength of the parties. However, while a lockout as a measure of settlement of disputes has ceased to be a practical proposition, a lightning strike has not yet gone out of vogue. In fact, a threat of it has often been an irresistable weapon in settlement of disputes. No industry or business is now so unimportant to the national economy as not to need protection against sudden stoppage of work. No substantial organizations should be allowed to be damaged by outmoded measures.

67. The Industrial Disputes Ordinance, 1959, lays emphasis on conciliation and arbitration rather than on promotion of bilateral collective bargaining. The Trade Unions Act was amended in 1960 to include a provision for the compulsory recognition of representative trade unions by the employers in order to promote collective bargaining, but the amendment has not accomplished the desired objective, and the employers and employees do not willingly enter into collective bargaining in good faith except under the supervision of the Government Conciliation Officer. The Trade Unions Act, 1926, still retains provision to encourage multiplicity of unions and their consequential formation on plant level by allowing the registration of unions with only seven members.

68. *Needed legislative revisions:* The industrial relations legislation should incorporate the following provisions in the relevant enactments in order to secure a fair deal for labour without denying employers their legitimate rights:

(*i*) The existing definition and schedules of Public Utility Services in the Industrial Disputes Ordinance should be drawn up on a more rational basis, and mandatory provision for compulsory arbitration of disputes in all public utility services should be made in the Ordinance.

(*ii*) All new employing establishments of a certain magnitude should be treated as Public Utility Service for the first five years from the date of actual commencement of operations.

(*iii*) Every industrial and business establishment of some magnitude should be entitled to a suitable notice of strike, the only difference being that public utilities should have a longer notice.

(*iv*) A statutory grievance procedure should be introduced for settling industrial disputes along the following lines:

(*a*) As a first step all collective disputes should be submitted by one party to the other, for direct bilateral collective bargaining in good faith between the employers and the employees or their unions without threat or notice of strike. The refusal of any party to enter into such negotiations should be treated as an "unfair practice".

(*b*) Direct negotiations between the employers and the employees or their unions should continue without threat of strike or lockout for a specified period, during which any strike or lockout should be considered as illegal.

(*c*) Only in case of failure of bilateral negotiations between the parties concerned, but not earlier than the expiry of the specified period, the serving of strike notice should be allowed, copies of which should be sent to the Government conciliation authorities.

(*v*) While the existing provisions of Section 4 of the Trade Unions Act may be retained, the Act should be amended to include a clear provision for the registration of industrywise federations of labour unions. The individual trade unions affiliated to a registered federation may be treated as automatically registered under the Trade Unions Act. This step would encourage the formation of industrywise federations.

69. *Implementation of awards and agreements:* Under the Industrial Disputes Ordinance, provision has been made for conciliation of disputes and for enabling the unresolved issues to be referred to Industrial Courts set up for the purpose. In some cases conditions of employment are regulated through negotiations and collective bargaining. There is no machinery to see that the awards or agreements reached as a result of collective bargaining are implemented and faithfully observed by the parties concerned. Failure to implement the awards and agreements has been a common complaint by both sides. An effective evaluation and implementation unit should, therefore, be set up to define the provisions of the awards and agreements, ensure strict observance by the parties of the obligations, and take proper action in case of breaches.

Provision of Safety and Security

70. During the Second Plan period the protective labour legislation dealing with safety, health, welfare, hours of work, weekly rest, rest intervals, minimum age of employment and special provisions for the employment of children and women,

was reviewed in order to bring it in conformity with the changing socio-economic conditions of the country. The enactment of the proposed revisions has been delayed and needs to be expedited. There is also need for strengthening the enforcement machinery, provision of training and undertaking of applied research in health and safety.

71. *Needed additional protection:* Safety provisions in the existing enactments need to be extended to works of civil engineering construction. It is necessary that various protective laws such as Shops and Establishments Acts and the Standing Orders Act, should be made applicable to contract labour, wherever possible, in order to prevent employers and contractors from exploiting contract workers. Statutory provisions regarding elementary requirements concerning ventilation, cleanliness, sanitation, supply of drinking water and the like need to be extended to cover news agencies and newspaper establishments, and banks. There is particular need of improvement in the hours of work for railways and road transport workers and for removing malpractices in the wage system openly practised by many road transport operators.

72. *Elimination of child labour:* For the elimination of child labour in non-agricultural employment the Factories Act and the Acts for shops and commercial establishments may be so co-ordinated as to cover all the ground in one or the other Act so as to prevent the employment of any child under a specified age in any work place or in any shop or commercial establishment. The present age limit for employment also requires to be raised.

73. *Safety and health institute:* The payments made under the Workmen's Compensation Act for various categories of accidents and the number of accidents in registered factories for the years 1960 to 1963 are shown below:

Payments made under the Workmen's Compensation Act in Thousand Rupees

	1960	1961	1962	1963
For Death	273	436	288	367
For permanent disablement	195	463	395	368
For temporary disablement	173	193	256	222
Total:	641	1,092	939	957
No. of reported accidents in registered factories, mines and docks				
Fatal	92	126	86	97
Serious	1,379	1,533	1,748	1,653
Minor	6,517	6,675	7,545	6,434
Total:	7,988	8,334	9,379	8,184

The above figures show that the total loss from accidents, covering the invisible losses from interruption in production work and the visible cash compensation paid to workers taken together has been more than what a modest applied research and training institute would cost. Its establishment is necessary also for the successful functioning of the proposed social security programme covering industrial injuries. The problems will stand out more in coming years, particularly on account of mechanisation, technical advances involving use of toxic chemicals and ionizing radiation and heavy industry complex of the proposed industrialization programme. Moreover, the influx into factory work of large numbers of persons unfamiliar with industrial hazards is also an important element.

74. One safety and health institute will be established in each province to provide training in undertaking and enforcing programmes of industrial safety and occupational health, to undertake continuing applied research, tests and studies on occupational safety and health problems, to disseminate educative information, sponsor conferences and training courses, and provide guidance on matters relating to occupational safety and health. The institute will also serve as consultant to government and private industry.

75. *Safety at mines:* Modern rescue appliances and personnel trained in rescue work are not available at the mines with the result that a number of fatal and serious accidents occur in the mines. Two rescue stations will, therefore, be established in coal mining areas of Quetta and Makerwal in West Pakistan.

76. The existing number of inspectors cannot inspect the mines even once a year whereas it is necessary to inspect a mine at least twice a year. Consequently, to ensure effective enforcement of safety measures in mines the Inspectorate of Mines will be adequately strengthened.

77. Adequate medical facilities will be provided for indoor and outdoor treatment to the mine workers in Kalat, Quetta, and Sargodha Divisions. Remedial measures are also needed for setting up water pumping stations in the coal mining areas, or where this may not be possible, to make arrangements for water carrying trucks which may fill and supply the necessary quantity of water to the miners at site.

78. *Agricultural labour:* There is no principal labour legislation applicable to workers in agriculture other than workers in organised tea plantations, who are covered by the Tea Plantation Labour Ordinance, 1962. Conditions of employment in cotton and fruit plantations of West Pakistan could possibly be regulated on the same pattern. It also seems practicable to provide protection to the landless agricultural labourers against inadequate or non-payment of full wages by amending the Payment of Wages Act, 1936, which has at present a limited application.

79. *Social Security:* An integrated social security system envisaging the protections provided under the Employees' Social Insurance Ordinance, 1962 (*i.e.*, employment injury, maternity and sickness) together with provision of statutory superannuation benefits through pooling of existing provident funds and their extension will be initiated immediately. It will mature by the end of the Third Plan period. The provision of statutory unemployment insurance against the setting of widespread unemployment and underemployment can at best be left to a distant future.

80. *Industrial welfare centres:* The impact of technological changes has undoubtedly created the need for enhancing the limited scope of activities of the labour welfare centres, which have hitherto been used primarily as a place of entertainment or amusement for industrial workers. The institution of welfare centres needs to be reoriented to help in raising the skills of workers in such technical trades in which either they are already engaged or they wish to learn. The labour welfare centres, should among other activities, provide for screening of such regular films as can help in raising the skills of workmen in different trades or occupations. Such films can be imported with the help of foreign friendly countries. Twenty additional films will be produced in each Province in local languages. It is proposed to increase the number of industrial welfare centres from 19 (only 9 of which are fully completed) to 31 in East Pakistan, and from 4 to 29 in West Pakistan.

81. *Housing for industrial workers:* The Labour and Social Welfare Division had proposed early in 1959 to enact an industrial housing legislation. But the proposed legislation has not yet been enacted. The enactment of a suitable housing legislation should be expedited by the Provincial Governments. The law should, *inter alia*, make it obligatory on industrial establishments employing 500 or more workers to provide housing for at least one-half of their employees, and on establishments employing less than 500 but more than 200 workers to provide housing for at least one-third of their workers. For the rest of the workers who may not be covered by these provisions, the law should provide setting up of two special housing corporations, one in each Province. The establishments employing less than 200 workers but more than 50 workers should be made to bear an appropriate share of the expenses. These corporations should be subsidised and helped with loans by the Provincial Governments to serve as capital for construction of houses for workers. Suitable rules should be framed for allotment, ejectment and administration of the housing accommodation for workers with a view to ensure their freedom of association and right of collective bargaining.

Financing and Physical Targets

82. The "manpower development" programme, looked at in its broad context forms part of programmes of many sectors. The term "manpower development" not only includes formal education, but also training for performing a particular

job or series of jobs. Many degree and diploma level skills like those of teachers, engineers, scientists, agricultural experts, and doctors are developed in schools, colleges and universities. A very much larger number of persons, however, acquire skills, particularly at the level below that of certificate, through apprenticeship or on-the-job training. The word 'development' implies 'upgrading' through training or experience. The term "manpower development" in its broader aspects also includes recruitment, placement and commitment of the labour force. The allocations proposed in the public sector programmes of the Third Five-Year Plan for "manpower development" in its broader sense are given below:

Sectoral Allocations for Manpower Development—1965-70
(Public Sector)

(In Million Rupees)

SECTORS	East Pakistan	West Pakistan	Centre	Total
1. Agriculture	161.94	67.07	24.24	253.25
2. Industry	18.00	20.00	125.00	163.00
3. Fuels and Minerals	10.00	17.00	10.00	37.00
4. Water and power	10.80	15.84	14.50	41.14
5. Transport and communication	14.00	9.00	43.00	66.00
6. Education and training:				
(i) Technical education	360.00	277.00	Nil	637.00
(ii) Teacher education	60.00	78.00	Nil	138.00
(iii) Others including formal primary, secondary Madrasah and higher education	980.00	795.00	170.00	1945.00
Total (education and training)	1400.00	1150.00	170.00	2720.00
7. Physical planning and housing	7.00	8.50	Nil	15.50
8. Health	140.00	85.00	38.00	263.00
9. Family Planning	53.90	49.00	Nil	102.90
10. Social welfare	2.60	2.50	Nil	5.10
11. Manpower training and labour	40.90	21.00	6.00	67.90
12. Public administration	2.00	2.00	6.00	10.00
Total:	1861.14	1446.91	436.74	3744.79

The above table does not present the total amount of expenditure which will be incurred on "manpower development" during the Third Five-Year Plan because it does not cover the non-Plan expenditure on programmes of manpower development in the public, semi-public and private sectors falling outside the coverage of the Third Five-Year Plan.

83. The "Manpower Training and Labour" Sector programme covers skill development programmes of the certificate level and below, programmes of welfare, safety and protection for industrial workers against employment injury, and for maintaining orderliness in industrial relations, for which the Labour and Social Welfare Division, the Provincial Labour Departments, and certain other Central and Provincial Departments are responsible. The allocation for these programmes in the public sector, which is classified as developmental expenditure is Rs. 103.00 million. An estimated amount of Rs. 20.00 million will be spent in the private sector. The sub-sector-wise and region-wise details of these allocations are shown below:—

Allocation for Manpower Training and Labour Programme

Sl. No.	Sector/Sub-sector	East Pakistan	West Pakistan	Centre	Total
	Public Sector		***(Million Rupees)***		
1.	Manpower training and development	40.90	21.00	6.00	67.90
2.	Labour market organization	6.30	3.00	1.50	10.80
3.	Promotion of industrial peace	4.00	0.20	—	4.20
4.	Provision of safety and security	9.30	3.50	2.50	15.30
5.	Analysis, evaluation and statistics	4.50	0.30	—	4.80
	Sub-Total:	65.00	28.00	10.00	103.00
	Private Sector				
6.	Manpower Training and Development	2.00	2.00	—	4.00
7.	Provision of Safety and Security	8.00	8.00	—	16.00
	Sub-Total	10.00	10.00	—	20.00
	Total	75.00	38.00	10.00	123.00

Note: An additional public sector allocation of Rs. 20 million, 10 million each for East and West Pakistan, for initiation of industrial workers' housing corporations is included in the Physical Planning and Housing Sector Programme.

84. The important physical targets which are expected to be achieved as a result of a developmental expenditure of Rs. 103 million in the Manpower Training and Labour sector are given below:—

Important Physical Targets for the Third Five-Year Plan (1965-70)

By Geographical Location

Sl. No.	Programme	Unit	East Pakistan		West Pakistan		Total	
			Existing at the beginning of the Third Plan period	Additional Third Plan target	Existing at the beginning of the Third Plan period	Additional Third Plan target	Existing at the beginning of the Third Plan period	Additional Third Plan target
1	2	3	4	5	6	7	8	9
1.	Pilot research projects for employment promotion	Number	—	2	—	2	—	4
2.	Skilled labour training centres	,,	2	8	4	6	6	14
3.	Training centres for released defence personnel	,,	—	1	—	1	—	2
4.	Seamen's training ship/centre	,,	—	1	—	1	—	2
5.	Experimental project for training of self-employed artisans	,,	—	1	—	1	—	2
6.	Training projects for construction skills in Training Wing of Labour Directorates	,,	—	1	—	1	—	
7.	Apprenticeship training advisory offices	,,	3	4	4	7	7	11
8.	Employment exchanges	,,	5	12	15	5	20	17
9.	University placement bureaus	,,	—	4	—	6	—	10
10.	Production of films for workers' education	,,	12	20	—	20	12	40
11.	Industrial safety and occupational health institute	,,	—	1	—	1	—	2
12.	Mines rescue stations	,,	—	—	—	2	—	
13.	Industrial courts	,,	2	2	3	3	5	5
14.	Social security institutions	,,	—	1	—	1	—	2
15.	Industrial workers' housing corporations	,,	—	1	—	1	—	
16.	Labour welfare centres	,,	19	12	4	25	23	37
17.	Seamen's hostel	,,	1	—	—	1		

CHAPTER XIV

HEALTH

Introduction

Health is both a means of achieving development and one of the principal goals of development itself. The aim of integrated social and economic development is to improve the general level of living of the people. Thus the health standards of the country are both a reflection and a cause of the prevailing economic levels.

2. The important role that human capital plays in development is now universally recognized. Health is one of the major factors determining the quantity and quality of the output of this capital. Investment in health pays rich dividends both in the form of improved human welfare and increased productivity. This emphasizes the importance of improved health standards for economic development, and accounts for the fact that health programmes have formed an increasingly important part of national development plans in Pakistan. Allocations for the health sector have risen from Rs. 287 million in the First Plan to Rs. 1,370 million in the Third.

Development to date

3. The First Five-Year Plan (1955-60) contained a very modest programme for the health sector, but the implementation of even this programme was quite unsatisfactory. Only about 50 per cent of the total Plan allocation of Rs. 287 million was utilized. The utilization of funds allocated for preventive services was even lower, *i.e.*, about 25 per cent, although the Plan had placed perceptibly greater emphasis on such services. The main reasons for these serious shortfalls were lack of qualified and trained personnel for implementation and delays in the commitment of funds.

4. The Second Plan period has witnessed a vastly improved performance in the health field. The pace of implementation has increased substantially and it is estimated that actual expenditure will exceed the Plan allocation of Rs. 370 million by approximately Rs. 50 million. The number of doctors is expected to rise to 15,600 by the end of the Plan period against the Plan target of 13,000. Three new Medical Colleges, one each at Dacca, Sylhet and Mymensingh, have been started and preliminary work has been initiated for setting up a medical college at Barisal. A systematic programme to provide medical coverage to the rural population has been ushered in and nearly 200 Rural Health Centres are likely to be established by the end of 1964-65. A long-range programme for the eradication of malaria has also been launched. The entire population of East Pakistan was vaccinated

against small-pox resulting in a decrease from about 79,000 cases in 1958 to about 50 cases in 1964. The number of hospital beds increased from 28,000 in 1960-61 to 35,500 in 1964-65. There was all-round improvement in training facilities for medical and paramedical personnel; although personnel in the latter category are still scarce. General improvement also took place in the organizational and administrative set up for the implementation of development programmes. In short, achievements during the Second Plan period have helped to provide a base over which an adequate structure of health services can be built for the future, and have enabled the inclusion of a health programme in the Third Plan which is about four times as large as that under the Second Plan.

5. The excess of financial expenditures over allocations under the Second Plan is indicative of the improved absorptive capacity of the health sector. Nevertheless, there have been shortfalls in the achievement of certain physical targets particularly in regard to rural health centres. These shortfalls can be attributed to the following factors:

(*a*) The costs of some of the schemes were initially under-estimated, and increased as a result of subsequent revisions. Since actual commitment of funds could not match the revised costs, the schemes could not be implemented in full. Examples of such schemes are rural health centres, both in East and West Pakistan, medical colleges in East Pakistan, and district hospitals in West Pakistan.

(*b*) Some important non-Plan schemes of an inescapable nature (the three new medical colleges in East Pakistan and the Ayub National Hospital at Dacca) had to be accommodated within the existing Plan allocations resulting in the slowing down of some of the Plan schemes.

(*c*) Delays in construction and in procurement of equipment have slowed down the progress of various health projects.

6. The statement below summarizes the position with regard to the targets and achievements of the Second Five-Year Plan:

	Second Plan target	Second Plan achievement
	(Numbers)	
Doctors	13,000	15,600
Nurses	3,500	3,600
Lady health visitors	2,000	1,047
Hospitals beds	36,000	35,500
Tuberculosis clinics	82	96
School health clinics	56	68
Rural health centres	320	200
Nurses training centres.	22	18
Medical colleges	9	12

Problem areas in the Health sector

7. Despite the progress achieved so far, health standards in Pakistan are still exceedingly modest as compared to those obtaining in advanced countries of the world. An idea of the disparity can be had from the following table:

	Pakistan 1965	United Kingdom 1961
Doctors	1:7,400	1:910
Nurses	1:32,000	1:440
Hospital beds	1:3,200	1:100
Lady health visitors	1:115,000	1:4,000
T.B. beds	1:50 fatal cases	1:0.16 fatal case
Rate per 1,000 population:		
Crude mortality rate	29	12
Birth rate	55	17.9
Infant mortality rate	155	22
Maternal mortality	30	0.7
Mortality rate per 100,000 population due to:		
(*a*) Malaria	100	*Nil*
(*b*) Diarrhoea/dysentery	320	*N.A.*
(*c*) Tuberculosis	100-150	40

8. The above figures show that the chief causes of both morbidity and mortality are largely preventable and stem from low standards of living and lack of properly developed health services. They also point to a number of problem areas in the field of health, each of which is briefly discussed in the following paragraphs.

9. *Statistical deficiencies*. An accurate quantitative assessment of the country's health problems is not possible for want of reliable data. Vital statistics are infrequently recorded, morbidity data are far from complete, and even the registered causes of mortality and morbidity are unreliable. However, broad orders of magnitude can be arrived at from returns of Government health institutions and a number of surveys conducted by various organizations.

10. *Lack of proper environmental sanitation*. Perhaps the biggest single cause of morbidity is the absence of proper environmental sanitation. To illustrate, it is estimated that in East Pakistan nearly 50 per cent of all illnesses are attributable to gastro-intestinal disorders like diarrhoea, dysentery, worm-infections, enteric fever and cholera, all of which thrive only in insanitary conditions. Protection against some of these diseases can be provided by inoculation, but permanent eradication requires arrangements for a proper disposal of sewage and the

provision of safe drinking water. While financial provision for these items is made under the Physical Planning and Housing Sector, promotion of environmental sanitation is one of the principal functions of the health personnel, especially those working in the rural areas.

11. *Low nutrition standards*. The low state of nutrition makes the population more vulnerable to disease. Preliminary returns from a nutrition survey recently conducted in East Pakistan indicate that in many areas the caloric intake is below even the minimum standards recommended by the Food and Agriculture Organization. Moreover, the composition of the diet is unbalanced and particularly deficient in protective foodstuffs. The nutritional problem arises not only from low *per capita* but also incomes from general unawareness of dietary deficiencies and their correctives. While some improvement in dietary habits can be expected as a result of rising incomes, it is clear that the various health organizations will have to play a more vigorous role in disseminating knowledge about the proper composition of a balanced diet and its importance in the prevention of illness and in the maintenance of good health.

12. *Malaria*. A serious problem is posed by the high incidence of malaria which claims approximately 100,000 lives every year. It is largely prevalent in the rural areas and affects the population during the peak seasons of activity, leading to losses both human and economic. The experience of many countries shows that it is technically feasible to completely eradicate this disease. Since 1961, a 14-year phased programme of malaria eradication has been under way in this country.

13. *Tuberculosis*. Another disease with a very high incidence is tuberculosis, claiming about 150,000 lives every year. A tuberculosis survey conducted in West Pakistan has revealed that one out of every 22 persons suffers from pulmonary tuberculosis. A similar survey is being conducted in East Pakistan and although it is not yet complete the rate of incidence in that Wing is unlikely to be lower than in West Pakistan. The incidence is higher in the male population and most marked between the ages of 20 to 40, *i.e.*, at the prime of the working life. The first two Plans emphasized BCG vaccination campaigns and the establishment of hospitals and dispensaries. The Third Plan contemplates a shift in emphasis from the provision of hospital beds to the establishment of a network of clinics which will facilitate both earlier diagnosis and domiciliary treatment.

14. *Child and maternal mortality*. It is estimated that approximately half of all recorded deaths are of children below the age of 10 years. Of these, about half are of children less than one year. Maternal mortality is also very high—almost five times that occurring in some developed countries. Both child and maternal mortality can be drastically reduced (as the experience of developed countries shows) by the provision of maternity and child health centres and school health facilities. It is clearly not possible to provide fully adequate facilities on the required

scale during the span of the Third Plan period. Steps will, however, be taken to provide one M.C.H. worker for each union council for domiciliary advice, care and follow-up. In addition, improved institutional facilities will be available at rural health centres, maternity and child health centres, and referral hospitals.

15. *Paucity of trained personnel.* The biggest single obstacle to having a large health programme is the scarcity of trained personnel, particularly of paramedical personnel. During 1964-65 East Pakistan may have as many as 6,700 doctors but only about 550 nurses and 147 health visitors. The situation in West Pakistan is slightly but not very much better. Continuous and vigorous action is needed to improve the proportion of paramedical personnel in order to utilize fully the available institutional facilities and man the additional extension services proposed. Towards this end, the training programme provided for in the Third Plan will emphasize the expansion and consolidation of existing institutions as well as the establishment of new ones for the training of such personnel.

16. *Rapid growth of population.* The present rapid rate of population growth, if not effectively and speedily checked, can swallow up in course of time whatever progress in living standards is achieved through development plans. To meet this challenge, the Third Plan accords a very high priority to family planning within the health sector, and includes a family planning programme which in financial terms is nine times that in the Second Plan. The family planning programme is discussed in detail in Chapter XV.

Objectives and policies

17. The health programme of the Third Five-Year Plan is conceived within the context of the long-term goal of providing adequate health protection to the entire population within the next 20 years. The long-term objective of any Health programme must, in broad terms, be to maximise each child's chances of survival at birth, to increase its average life expectancy, and to ensure that it enjoys good health throughout its lifetime. These aims are all inter-related; however, the various aspects must be given varying emphasis at different stages of a country's development. They require not only the promotion of preventive and curative health services, but also the creation of basic environmental conditions conducive to healthy living. Since availabilities of resources, both human and material, seriously limit the speed with which health problems can be solved, the function of planning in health is to establish priorities with an eye on maximising benefits for a given cost. The principles of health policy on which the Third Plan health programme has been formulated are enunciated below:

(*a*) Ensuring availability of the most essential health services to all members of the community;

(*b*) development of an integrated health service with greater emphasis on public health;

(*c*) development of the essential framework of a comprehensive and regionalized health organization, especially in the rural areas, through which all health programmes can be implemented and maintained;

(*d*) recognition of the fact that certain diseases such as malaria, tuberculosis require special campaign-type health programmes, until a satisfactory comprehensive framework of health services has been built to facilitate their integration into the regular health services;

(*e*) special health measures for the protection of selected groups like children, mothers, and industrial workers, through maternal and child health services, school health services, nutritional programmes and industrial health programmes;

(*f*) simultaneous development of training programmes to man various services and carry out essential programmes;

(*g*) special measures designed to materially increase the supply of medical personnel in rural and semi-urban areas;

(*h*) consolidation and gradual expansion of curative services which fulfil an essential need;

(*i*) establishment of an efficient statistics and record-keeping system, not only for purposes of planning but also for evaluating effectiveness of various health activities;

(*j*) provision of guidance and leadership in the improvement of environmental sanitation and nutritional standards;

(*k*) special measures for control of population;

(*l*) active participation by local communities in the formulation and implementation of health programmes.

PROGRAMMES DURING THE THIRD FIVE-YEAR PLAN

18. Like the first two Plans, the Third Plan will continue to place greater emphasis on the formation and development of preventive services *vis-a-vis* curative services. This is unavoidable in a situation where resources in trained manpower and materials are scarce and must, therefore, be put to optimum use.

19. **Malaria eradication programme.** A programme for the complete eradication of malaria has been in progress since 1960-61. The programme is divided into four operational phases, and every district brought under malaria control operations passes through these phases:

(*a*) *Preparatory phase*. During this phase, whose duration is generally one year, the staff is recruited and trained. A census of inhabitants of every house is conducted to determine the prevalence of the disease.

(*b*) ***Attack phase***. This phase extends from 3 to 4 years during which every roofed structure is sprayed just before the commencement of the transmission season of malaria. Malaria cases are located through house to house search and given treatment.

(*c*) ***Consolidation phase***. During this phase, extending from 2 to 3 years, the wholesale spraying of houses is discontinued, but house to house search for malaria cases and their treatment goes on.

(*d*) ***Maintenance phase***. After the disease has been wiped out from the country, the maintenance of the results accomplished becomes the responsibility of the normal health services.

20. The implementation of the malaria eradication programme is supervised by an autonomous central policy making organization called the Malaria Eradication Board. Two Provincial boards are responsible for the actual execution of the programme. Six districts in East Pakistan with a total population of 19 million have been covered so far by the programme. In West Pakistan, the number of districts covered is 22 with a total population of 28.4 million. The results achieved under the programme thus far have been quite encouraging. In the districts covered to date, it has been observed that the parasitic rate, which is an index of the intensity of incidence of malaria, has come down from 20-25 per cent to about 0.4 per cent·

21. During the Third Plan, work under the attack phase will be extended to the remaining parts of the country and the entire country is expected to be covered by 1970. By the end of the Plan period, four districts in East Pakistan and five in West Pakistan will have entered the maintenance phase. All the other districts will remain under either the consolidation or the attack phases. By the end of the Third Plan it is expected that over 20 million of the population will be totally free from malaria. For another 45 million, the disease will occur rarely and for the rest of the population the parasitic index is expected to decline from the present 25 per cent to less than four per cent. Since the maintenance phase after the elimination of the disease will be the responsibility of the normal health services, it is intended, as far as possible, to co-ordinate the malaria eradication programme with the development of health services. Pilot projects are being taken up in Sheikhupura district of West Pakistan and Dinajpur district of East Pakistan, to determine the ways and means of integrating the malaria eradication programme with the rural health programme. These pilot projects will also help to assess the requirements of technical manpower and physical facilities in areas entering the maintenance phase.

Control of tuberculosis

22. The eradication of tuberculosis is linked with improvement in the general living standards of the people and as such, will take a long time. A master plan

for the effective control of tuberculosis over a period of 20 years is being worked out. A three-pronged attack on the disease will be continued during the Third Five-Year Plan.

23. *B.C.G. vaccination programme.* B.C.G. vaccination affords protection against tuberculosis for a period of 3 to 4 years. The B.C.G. vaccination campaign was started in the country in 1949 and so far 56 million persons have been tuberculin tested and 22 million persons vaccinated. An overall assessment of the B.C.G. campaign will be undertaken during the Third Five-Year Plan to determine the extent of its success and identify measures for making it more effective.

24. *Tuberculosis clinics.* For the diagnosis, treatment, and welfare of those who are suffering from tuberculosis, the emphasis is now shifting from the provision of hospital beds to the setting up of tuberculosis clinics where ambulatory treatment can also be carried out. At the rate of one T.B. clinic for 100,000 population, it will be necessary to provide 1,900 clinics to cover the entire population of the country in the next 20 years. There are, at present, 96 clinics in the country During the Third Plan period 75 more T.B. clinics will be set up in West Pakistan. In East Pakistan, 10 T.B. clinics will be started in urban areas, whereas in the rural areas, the T.B. clinics will form part of the Rural Health Centres.

25. *Tuberculosis hospitals.* Although future emphasis will be on the protection of population largely through B.C.G. vaccination and through the provision of T.B. clinics, it will still be necessary to increase to some extent the number of beds needed for the treatment of T.B. cases. At present there are approximately 2,500 beds for T.B. patients in the country. An additional 950 beds will be provided during the Third Plan period, 500 in West Pakistan and 450 in East Pakistan. Work under two Pilot Area Projects, located at Dacca and Rawalpindi, will be continued during the Third Plan period to find out the most effective method for the treatment and control of the disease. The future pattern of approach towards the control of this disease will mainly depend on the results of these two Pilot Projects. Two 100-bedded research hospitals, one each at Rawalpindi and Dacca, will also be provided.

Leprosy

26. The exact number of patients suffering from leprosy is not known but according to rough estimates there are about 100,000 cases in the country of which the majority is in East Pakistan. About one fourth of these cases are considered to be infectious. Provision has been made in the Plan for setting up 5 leprosy clinics in East Pakistan at Rajshahi, Mymensingh, Chittagong, Khulna and Barisal. Four mobile units will be provided at Mymensingh, Chittagong, Khulna and Barisal.

Mental health

27. The exact incidence of mental illness in the country is not known, but according to available evidence it can be assumed to be fairly high. The incidence of psychiatric morbidity is estimated to be nearly 160,000 cases. The fast pace of industrialization and urbanization has further added to the problem of mental ill-health. Existing facilities for the treatment of mental patients in the country are inadequate. Measures are proposed during the Third Plan period to increase the facilities for the treatment of mental cases.

Rural health programme

28. Before the Second Plan period no organized health service was available for the vast majority of the country's rural population. In 1960 a rural health programme was initiated contemplating the creation of a network of rural health centres, in both Wings of the country. Each rural health centre consists of a primary unit and 3 sub-centres and provides medical cover to a population of about 50,000. The Centre provides facilities for medical treatment, maternity and child welfare, family planning, environmental sanitation, control of communicable and infectious diseases, health education, and the compilation of vital statistics. The primary unit is manned by a male and a female doctor, a health visitor, health laboratory technicians and other auxiliary staff.

29. By 1965, there will be approximately 200 rural health centres, 100 in each Wing. The health personnel posted to these centres generally find themselves overburdened with curative work and have little time to devote to preventive programmes. To remedy this situation, and to make the programme purposeful and meaningful, two pilot areas, one at Sheikhupura in West Pakistan and the other at Dinajpur in East Pakistan, have been selected in order to study various approaches for developing an integrated health service in the rural areas. These pilot projects will also study the implications of integrating the malaria eradication programme, the small-pox eradication programme, school health and maternity and child care with rural health services. The results are expected to be available in 1965-66.

30. During the Third Plan period 200 new rural health centres will be set up and 200 existing dispensaries upgraded in West Pakistan to function as rural health centres. In addition, it is proposed to provide services at every union council by posting one lady health visitor, one sanitarian and one health assistant. A total of 750 union councils will be covered by these services by 1970. In East Pakistan 260 rural health centres with 3 sub-centres each will be built in every Thana bringing the total to 360 by 1970. All the maternity and child health and B.C.G. activities will be carried out through the rural health programme. In addition, one health assistant has been posted at each union council to carry out preventive programme.

31. The rural works programme has released enormous amounts of hitherto dormant forces of initiative and enterprise in the rural areas. It is intended to make full use of these forces in order to secure maximum local participation in the implementation of both the health component of the rural works programme and the health programme in general. The idea of self-help will be encouraged and wide publicity will be given to health programmes and objectives and their likely impact on rural life.

Medical education and training

32. During the Third Plan period, a concerted effort will be made to improve and augment the training and educational facilities for medical and paramedical personnel.

33. *Undergraduate medical training*. There are at present 12 medical colleges in the country—six in each Wing. Out of the six existing colleges in East Pakistan only three have suitable buildings and adequate staff. All the existing medical colleges, both in East and West Pakistan, will be improved and strengthened during the Third Plan. A teaching hospital will be provided for the Khyber Medical College, Peshawar. Work for starting two new medical colleges at Barisal and Rangpur in East Pakistan will be taken up. The number of doctors is expected to rise from 15,600 in 1964-65 to 19,800 in 1969-70.

34. Even though the number of doctors in Pakistan is insufficient to meet the requirements of the population, large numbers leave the country every year to seek employment abroad. Again, the distribution of doctors is unbalanced, with the larger urban areas having as many as one doctor to 700 population while the rural areas have only 1 to 10,000 or 20,000 population. The reasons for both these problems are largely economic. Because of the already large numbers of doctors in the cities new entrants are often unable to earn an adequate living. They are unwilling to work in the rural areas because of the following main reasons:

(*a*) *Inadequate financial returns:*

The doctor posted in rural health centres and in many referral hospitals is paid poorly and ranked under Class II Service. He has little scope for private practice and his living conditions are bad, without electricity, sanitation, telephone or transport.

(*b*) *Unsatisfactory working conditions:*

The working conditions of a doctor posted in Rural Health Centres and Referral Hospitals leave much to be desired. There are inadequate investigation facilities, lack of equipment and trained personnel and complete absence of any kind of supervision. Because of his inability to use the knowledge that he has taken so many years to acquire the doctor tends to feel frustrated.

35. As a first step towards remedying this state of affairs, proposals for linking up the rural health centres with medical colleges and referral hospital are being worked out. Medical graduates will be rotated during the period of internship through the rural health centres instead of being posted only at medical college hospitals. This step will raise the level of health services and provide an incentive for working in these services. Care should be taken, however, to ensure that the institutions at the periphery are well equipped and that proper supervision from the teaching staff of medical institutions is available to medical graduates and undergraduates continuously. In addition, it is essential to promote the private sector in the rural areas. The Pakistan Medical Association is undertaking a survey and will suggest ways and means to promote the dispersal of doctors to rural and semi-urban areas.

36. Medical training which lays much greater emphasis on the curative aspect has tended to produce personnel who have little interest in preventive medicine. To overcome this shortcoming, courses of medical colleges are being reviewed in order to adapt them to the country's requirements. In this connection a full time department of preventive medicine and public health is being started in almost all the medical colleges headed by a full time professor.

37. *Postgraduate medical education.* The Postgraduate Medical Centre at Karachi, which offers courses in basic sciences and some of the clinical subjects will be further expanded and improved. A new postgraduate medical centre will be set up at Dacca in East Pakistan. The scheme for setting up a school of tropical medicine at Dacca which is under implementation will be completed. The Institute of Hygiene and Preventive Medicine at Lahore will be improved. With the development of facilities for postgraduate training, the position with regard to availability of tutorial and other staff for the medical colleges in the country is expected to improve considerably.

38. *Training of paramedical personnel.* The Third Plan places special emphasis on the improvement and expansion of facilities for the training of paramedical personnel. New training institutions will be set up and the existing ones expanded. In East Pakistan, two training centres for lady health visitors and six training centres for nurses will be provided. In West Pakistan, two training centres for health assistants will be started. Provision for residential accommodation for nurses has been made in the development programme of both East and West Pakistan.

Medical research

39. Existing facilities for medical research are inadequate to meet the demands of an expanding and developing sector, and need substantial expansion. An element of research is inherent in certain development projects included in the Plan. Research in the field of medicine and health will receive further impetus in the course of the Third Plan period.

40. Research on nutritional diseases, trachoma, cholera, diarrhoeal diseases and tuberculosis started during the Second Plan will be continued. Proposals are also under study for the setting up of research cells in medical colleges.

Hospital beds

41. There are at present 35,500 hospital beds in the country—9,200 in East Pakistan and 26,300 in West Pakistan. This gives a ratio of 0.3 bed per thousand population. Not only is this bed-population ratio very low, but also most of the hospitals are deficient in modern equipment, essential buildings, and requisite staff. It is proposed to increase the number of hospital beds to 48,300 by 1969-70. This increase will include beds which are being provided under other programmes of the health sector, *viz.*, rural health centres, and medical institutions in the private sector. In providing hospital beds, priority will be given to the hospitals at tehsil, subdivisional and district levels, which will serve as referral hospitals under the rural health programme. Out of 12,800 additional beds to be provided in the Third Plan period, 7,800 will be in East Pakistan and 5,000 in West Pakistan. In addition to the improvement and expansion of all Sadar and Sub-Divisional Hospitals, fourteen 50-bedded hospitals will be provided in rural areas of East Pakistan. In West Pakistan work on the construction of five new hospitals in district headquarters at Jhelum, Gujrat, Sialkot, Sanghar and Jhang, which was started during the Second Plan period, will be completed. Hospitals located in the urban areas of Lahore, Peshawar, Quetta, Bahawalpur, Karachi and Hyderabad will be further improved and expanded. Under the Central health programme, a 500-bedded hospital at Islamabad and a 200-bedded hospital in the subsidiary capital at Dacca will be completed. The Central Government will also establish a 50-bedded hospital at Chittagong.

Vital and health statistics

42. A vigorous effort will be made during the Plan period for developing facilities for the collection of vital and health statistics in order to make the planning of health services more purposeful. A 20-year Master Plan has been prepared by the Ministry of Health for the development of vital and health statistics at the national level. Under this Plan, the entire urban population of the country will be covered and, if possible, some rural population as well. In order to have effective control for the registration of vital events, it is planned to appoint registrars in all the towns/municipal committees and cantonment boards, one for every 10,000 inhabitants. The compilation of vital and health statistics in the rural areas will be the responsibility of the rural health centres.

Nutrition

43. Research will be undertaken during the Third Plan period to determine the nutrient contents of Pakistani foodstuffs. A study of the effects of seasonal variations on dietary habits will be made. Research will also be conducted into

nutritional diseases like anaemia, goitre, and the like. Research for proteinous food and cheap nutrients will be done. Special emphasis will be laid on the education and guidance of the masses on nutritional aspects. All community and other health workers will, therefore, be trained in practical nutrition. The methods to be employed for the improvement of nutrition will also be studied by the pilot project at Sheikhupura.

Industrial health

44. The promotion of industrial health services in the country has not kept pace with the rapid growth of industrialization. The health needs of industrial workers which deserve special treatment have two aspects:

(*a*) Safeguarding the industrial workers from occupational hazards; and

(*b*) protection of the local environment from the harmful effects of industrialization.

45. Unfortunately no proper organization exists at present to look after either aspect. The Factories Act, 1934, which is the major piece of legislation safeguarding the interests of the industrial workers in relation to their working conditions is not being strictly enforced. There is no legislation providing for demarcation of areas for setting up industries. The Social Insurance Legislation of 1962 provides for insurance against injury, maternity and sickness, but its application is still being worked out by the Provinces. Industrial establishments have not concerned themselves much with the social and health needs of their employees, although there is evidence of a growing realization of their importance, both as a moral obligation and an economic necessity. More and more industries are now providing housing, food and health facilities to their workers. During the Third Plan period, laboratories will be set up at Karachi and Dacca for conducting research on the health requirements of industrial workers, as a prelude to the setting up of a full-fledged industrial health service in the country.

Maternity and child health services

46. There are at present about 700 maternity and child health centres in the country, 560 in West Pakistan and 140 in East Pakistan. These centres provide *inter alia* health care for children from birth upto 5 years of age. The future policy is to provide for maternity and child health services as part of the general health services and not in separate maternity and child health centres. Accordingly, there is no special provision for maternity and child health services in the Third Plan, except for the frontier regions and the special areas.

School health

47. School children must be protected through a well-organized health service. There are at present 68 school health clinics in both Wings of the country. Each school health clinic looks after 5,000 to 8,000 children. During the Third

Plan period, these services will be consolidated. In West Pakistan, 22 school health clinics will be established in urban areas. In both Wings, the rural health programme will also include health protection to the school-going population. This will be achieved through the integration of health services proposed to be carried out as a result of pilot projects at Sheikhupura and Dinajpur already mentioned.

Health education

48. No health programme can be effective without the understanding, support and participation of the people. One of the principal objectives of the Third Plan health programme is the promotion of training in modern health education techniques, which will be organized for health workers as well as for teachers and those community development personnel who are required to deal with health problems. For this purpose, trained health educators will be posted in all the regions. There is already a Health Education Department at the Centre and a Directorate of Health Education in East Pakistan. A directorate is also being set up in West Pakistan.

Frontier Regions

49. The existing hospitals and dispensaries in the Frontier Regions will be improved and provided with better equipment. In addition, one rural health centre, 10 maternity and child welfare centres, 45 dispensaries and six hospitals with 106 beds will be set up during the Third Plan period.

Special areas

50. The Programme for the special areas covers malaria eradication, control of communicable diseases, and provision of additional medical facilities in the form of dispensaries, hospitals, maternity and child health centres and rural health centres.

Indigenous systems of medicine

51. The indigenous systems of medicine, such as Ayurvedic, Unani, and Homoeopathy, cater to the needs of a large proportion of the population. They play a very significant role in the private sector, especially in rural areas or those areas where qualified doctors are not available. Steps are being taken by the Government to accord recognition to these systems of medicine and also to regulate the activities of the practitioners of indigenous systems. Research on indigenous systems, started in the Second Plan period, will continue.

Miscellaneous

52. Other important matters for which provisions have been made in the Plan are: Organization of a blood transfusion service in West Pakistan; establishment of dental clinics in West Pakistan; establishment of medical stores both in

East and West Pakistan; higher training of doctors and paramedical personnel abroad; a reorganization of the Provincial Health Departments.

Private investment

53. The Plan envisages an investment of Rs. 40 million in the health sector by private enterprise. This investment will be forthcoming from philanthropists, voluntary welfare agencies and private practitioners. The role played by private agencies in the development of health facilities is by no means insignificant but unfortunately reliable data on the extent of private effort in this field are not available. There is urgent need to undertake a survey of health facilities provided by the private sector. Specific measures are also necessary for encouraging private investment in health. The Pakistan Medical Association has undertaken to prepare an action programme to promote the dispersal of doctors to rural and semi-urban areas.

Financing of health programmes

54. The development expenditure in the health sector is summarised in Table 1. Substantial recurring liability will arise as these programmes are implemented. Some preliminary estimates of the recurring liability have been made which are given below.

(Million Rupees)

	East Pakistan	West Pakistan	Centre	Total
Total recurring liability for the Plan period	131	128	14	273
Annual recurring liability by the last year of the Plan	45	48	5	98

55. The recurring liabilities will keep increasing under the future Plans. It is obvious that measures will have to be taken to ensure that these rapidly increasing liabilities are satisfactorily met. The Provincial Governments are already considering this problem.

TABLE 1

DEVELOPMENT EXPENDITURE FOR HEALTH AND FAMILY PLANNING (1965-70)

(Million Rupees)

	East Pakistan	West Pakistan	Centre	Total
Public Sector				
Malaria Eradication	221	190	3	414
T.B. Control:	13	16	6	35
(i) B.C.G.	*	(8)	(1)	
(ii) Clinics	(6)	(3)	—	
(iii) Beds	(7)	(5)	(5)	
Family Planning**	80	75	11	160
Rural Health Centres	123	75	—	198
Hospital Beds	68	62	28	158
Medical Education	129	62	38	229
(i) Undergraduate	(104)	(62)	—	
(ii) Postgraduate	(25)	—	(38)	
Training of Paramedical Personnel	11	23	—	34
Vital Health Statistics	15	44	11	70
Nutrition				
Industrial Health				
School Health				
Health Education				
Mental Health				
Miscellaneous Schemes				
Frontier Regions	—	13	—	13
Special Areas	—	—	13	13
Sub-Total	660	560	110	—
Private Sector	20	20	—	40
Total	680	580	110	1,370

*This is indicated under rural health centres.

**This programme is described fully in Chapter XV. The total cost of the programme is Rs. 284.4 million. It should be possible to accommodate the entire programme through readjustments in inter-sectoral and intra-sectoral allocations during the course of the implementation of the plan.

TABLE 2

PHYSICAL TARGETS IN THE THIRD PLAN

	1965	1970
Doctors		
Number of Doctors	15600	19800
Ratio	1: 7,400 population	1: 6,600 population.
Number of Medical Colleges	12	14
Nurses		
Number of Nurses	3600	5400
Ratio	1: 9 hospital beds	1: 8 hospital beds.
Ratio	1: 32,000 population	1: 24100 population.
Number of Nurses Training Centres	17 + 1*	23 + 1*
Hospital Beds		
Number of Beds**	35,500	48,300
Ratio	1: 3,200 population	1: 2,300 population.
Rural Health Centres	200	860
Population covered	10 million	50 million.
Lady Health Visitors		
Number of Lady Health Visitors	1047	2750
Ratio	1: 115,000 population	1: 50,900 population.
Number of training centres for lady health visitors	8	10
T.B. Control		
T.B. Clinics	96	181
T.B. Beds	2500	3450
Ratio	1: 50 T.B. Deaths	1: 35 T. B. Deaths.

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*Postgraduate Training Centre for Nurses.

**Beds provided under rural health centres programme and attached hospitals for medical colleges have been shown here.

CHAPTER XV

FAMILY PLANNING

The Problem

The population of Pakistan, estimated at over 110 million, exerts a heavy pressure on other productive resources. Unemployment and under-employment account for a full fifth of the labour force; yet, 45 per cent of the population is below the age of fifteen, an indication of the potential increase in the labour force. In East Pakistan, where agriculture absorbs a high proportion of the labour force, the cultivator holds 3.5 acres on an average. In urban areas alone, dwelling units are about a million short of needs. Over four-fifths of the population is illiterate. Evidence enough that one of the major impediments to higher standards of living is the size of the population itself.

2. High rates of population growth become in this context a serious problem. The rate of growth has accelerated to an estimated 2.6 per cent at present and is responsible for a marked dilution in the impact of past economic advances on the average man. National income rose by 28 per cent from 1950 to 1960 but this was so nearly offset by population growth, that per capita income increased only by Rs. 7/-. During 1960-65 a sharp acceleration in the growth rate of the G.N.P. enabled an increase of Rs. 42 in per capita income but this was made possible by great national effort which included a doubling of domestic savings between 1960 and 1965. Besides, sizeable advances in the fields of employment, housing and education were unable to reduce the backlogs mentioned earlier.

3. Moreover, the present 2.6 per cent growth rate of population may well increase in future. Pakistan is in a phase of demographic transition; of declining mortality rates unaccompanied by a corresponding decline in fertility. The mortality rate is projected to decline from 29 to 15 over the period of the Perspective Plan. To prevent a population explosion which may imperil most of the targets of the Perspective Plan, from tripling per capita income to universal literacy, the Plan assumes that birth rates will decline from 55 to 35. Thus, the growth rate in 1985 is expected to decline to 2 per cent and the overall growth rate during the period is estimated at 2.6 per cent.

4. Clearly, if the increases of per capita income postulated in the Perspective Plan are to be achieved, a decline in fertility rates is a necessary condition. The availability of modern medicines and related health facilities has been and continues to be the main determinant of the dramatic decline in mortality rates. The supply of contraceptive devices and extension of family planning facilities is similarly called for if fertility rates are to be contained.

5. The parallel, however, is limited. The ready response which makes successful any effort to combat mortality is not present where efforts are made to popularise family planning. In fact, any realistic programme of family planning must anticipate social resistance. Thus, the problem in the field of family planning is not merely to increase the supply of family planning devices but, what is more crucial, to make family planning acceptable and effective. Several related factors stand in the way of the acceptability and effectiveness of family planning. Some of these are discussed below.

6. Many couples do not feel the need for family planning. Often enough there is a positive desire to have more children, sons in particular, for economic as well as social reasons. The sons are seen as a form of insurance against old age. Moreover, in the agricultural sector, the sons share the workload from an early age. Finally, the high infant mortality rates in themselves become a justification for more children as not all are likely to survive.

7. Secondly, efforts to advise and consult on the methods and benefits of family planning are often stopped short by a refusal to even discuss what is commonly regarded as a delicate matter. This objection, which often acquires a religious overtone, is not surprising in a society which is still quite traditional.

8. Finally, there are the drawbacks in the methods of contraception. In the context of our society, contraceptives have to be cheap and simple, as well as effective. Even when it does not suffer from technical defects, a complex contraceptive frequently becomes ineffective upon inexact use and the failure of contraception will often decrease the desire to practise birth control.

9. The success of family planning would seem to require a method which should, ideally, combine the virtues of being cheap, simple and effective. The preference for one method or another will vary with individuals. In the Third Plan, the primary stress will be laid on the IUD (insertion of a plastic coil). Besides being cheap and effective, this method does not demand the constant participation of the user. It serves, therefore, as a precaution against indifferent, careless and imperfect use of contraceptives that often ends in the failure of family planning programmes.

First and Second Plan Performance

10. The importance of family planning was stressed in the First and Second Plans but the programmes actually embodied therein were limited in scope and have not produced any major impact. The First Plan provided a sum of only Rs. 500 thousand for family planning. A more elaborate scheme, estimated to cost Rs. 30.5 million was included in the Second Plan. Under this scheme, which was put into operation in 1960, a National Family Planning Board was constituted at the Centre and similar boards were set up in the Provinces. Upto June 1964, 1259 doctors, 251 lady health visitors, 204 nurses and midwives were trained in family

planning techniques. A National Research Institute of Family Planning has been set up at the Centre to conduct research on various approaches and techniques to be employed in the family planning programme. Five research-cum-training institutes have also been set up in the two provinces of the country. Out of 4,000 family planning clinics proposed in the Scheme, 2,750 (1,161 in East Pakistan and 1,589 in West Pakistan) have been established so far. The total number of old and new cases who visited these clinics up to June 1964, was 1.07 million. The present attendance at these clinics is, however, very poor and in fact is declining.

11. The achievements of this programme have on the whole fallen much below expectations. The allocation was too small to permit adequate supplies and proper distribution and the motivational barriers outlined earlier were not consciously tackled. Besides, the programme was administered as a normal function of the existing health services with the result that doctors and other health personnel running these services were over burdened with clinical work and could not give adequate attention to family planning.

The Third Plan Programme

12. The President himself has taken a keen interest in the population problem and has lent his approval to family planning programmes. Pakistan is one of the few countries where unstinted political support has been given to programmes of population control and considerable research and analysis is being devoted to this problem. A separate Division of Family Planning has been created to ensure the expeditious implementation of programmes in this field.

13. A revised scheme for family planning has been prepared which attempts to rectify the flaws and draw-backs experienced under the previous scheme. This scheme is expected to cost Rs. 280 million when fully executed. The Third Plan provides for an allocation of Rs. 166 million for this purpose—Rs. 80 million in East Pakistan, Rs. 75 million in West Pakistan and Rs. 11 million for the Centre.

14. The principal objective of the new programme is to bring down the birth rate from 55 per thousand to 45 per thousand. To achieve this target, 20 million couples who represent almost all the women in the reproductive ages in 1970, will be induced to practise family planning in one form or another. The scheme is to be launched in 36 districts of West Pakistan and 16 districts of East Pakistan during the Third Plan period. Two-third of the districts will be covered in the first two years and the remaining one-third in subsequent years. Priority will be given to those districts where the programme is most likely to be acceptable to the people.

Motivation

15. The success of any scheme will depend largely on how well the motivation to plan families is created and sustained. To overcome the objections, often vaguely conceived, that people may have to family planning, the scheme places great reliance on personnel who have the confidence of the people and are available in

the area to maintain permanent contact. The choice of the village 'dai' (midwife) as the central figure in the scheme is based on this consideration. The 'dai' in each village will be chosen from those women who are already consulted on sickness and sexual matters which should overside objections to discussing problems relating to birth control matters on grounds of their intimacy. That her advice is often sought on such matters, and presumably respected, gives the 'dai' a distinct advantage in her dual functions of a motivator and a dispenser of contraceptives.

16. Motivation will also be spread by other field workers and supervisors who will be selected on the merit of their experience in family planning and other sociological studies involving mass communication. They will be given further training in creation of motivation and aided by methods of publicity, including movies, spread the desire to plan families to groups as well as individuals. Primarily, the aim of group contacts will be to attack the rejection of family planning on misconceived economic and social attitudes by highlighting the decline in maternal and infant mortality and morbidity, illustrating positive economic gains of smaller families both to the parents and the children, and dispelling, with reasoned argument, social and supposedly religious taboos.

17. If motivation is to be sustained, the family planning programme must maintain ample supplies of contraceptives and ensure medical and advisory service wherever it is needed. Consequently, the programme aims at constant availability of medical advice to people wanting it through staffing personnel at each rural health centre and an even more widespread provision of medical and paramedical personnel. Furthermore, to simplify the distribution of contraceptives a central office will supply the desired quantities on direct demand by sellers, without any intermediary complications.

18. Finally, a very important feature of the programme is the monetary incentive it offers both to those who practise contraception and the personnel who propagate it. For each vasectomy both the doctor/lady health visitor/'dai' and the client will be paid Rs. 25/-. Insertion of I.U.Ds. will be free for the client. For each insertion doctors will be paid Rs. 8/- and trained nurses/midwives/'dais' Rs. 4/-. Besides, 'dais' will be paid Rs. 2.50 and others Rs. 2.00 for referring cases leading to an insertion. Contraceptives will be sold at subsidised rates and 50 per cent of the sales proceeds will go as commission to the sellers. More than in any other country, the monetary incentives are being assigned a significant role in the programme of family planning. Should the experiment succeed, it would reveal how powerful monetary incentives really are even in a field involving such complex human emotions and attitudes.

Organization and administration

19. There will be a Family Planning Council at the Centre and Family Planning Boards at the Provincial and district levels. All the Union Councils in West Pakistan and Thana Councils in East Pakistan will be associated with the pro-

gramme. The family planning work at these levels will be looked after by a Family Planning Supervisor (one for 3 Union Councils) in West Pakistan and Thana Family Planning Officer (one for each Thana) in East Pakistan. At the bottom of the heirarchy will be the village *dai*. She will perform such functions as motivating the people and distributing contraceptives. At the national level the programme will be supervised by the Family Planning Commissioner who heads a new Division in the Ministry of Health, Labour and Social Welfare to be called the Family Planning Division.

20. The administrative set-up at the Central, Provincial and District levels has been considerably strengthened. The scheme provides for 1,000 Family Planning Supervisors in West Pakistan who will work with the Union Council Secretaries. In East Pakistan 400 Thana Family Planning Officers have been provided. One general assistant, one female assistant and one male assistant will be attached to each Thana Family Planning Officer. A total of 50,000 village *dais* will be employed—30,000 in East Pakistan and 20,000 in West Pakistan at the rate of 1 *dai* for 2 villages or 1,600 population in East Pakistan and one dai for two villages in West Pakistan. About 2,400 part-time family planning doctors at the rate of 6 for each Tehsil in West Pakistan and 3 for each Thana in East Pakistan will be registered and appointed for the purpose of I.U.D. insertions and clinical sterilization.

Clinics

21. The scheme provides for the establishment of 37 whole-time urban clinics, in West Pakistan and 16 in East Pakistan, and 718 part-time clinics, 400 in East Pakistan and 318 in West Pakistan. The clinics will concentrate mainly on I.U.D. insertions. The part-time clinics will be housed in existing health institutions and are meant for the use of family planning doctors. Each whole-time urban clinic will have one lady doctor, one health visitor, one family planning counsellor and one female medical attendant. The scheme aims at 1.5 million I.U.D. insertions and 90,000 vasectomies/ligations from 1965-66 to 1969-70.

Transport

22. To secure adequate mobility and accessibility, a total of 345 jeeps will be procured for use by the family planning units. One jeep will be provided for each Tehsil and District Headquarters in West Pakistan and every two Thanas in East Pakistan.

Training programme

23. (a) Under the scheme, 150 lady doctors, lady health visitors and trained midwives from each Province will be imparted 10 days training in family planning techniques and motivational aspects. These medical and paramedical personnel will then train the lady doctors, lady health visitors and midwives in their respective Tehsils/Thanas.

(b) A 14-day training course has been prescribed for Family Planning Supervisors in West Pakistan and Thana Family Planning Officers in East Pakistan. In West Pakistan, Family Planning Supervisors will be trained at district headquarters and in East Pakistan six training centres will be opened at suitable places.

(c) Thana Family Planning Officers in East Pakistan will train their male and female assistants and Family Planning Supervisors in West Pakistan will impart training to Union Council Secretaries in a period of 2 weeks at Thana and Union Councils respectively.

(d) A training course of 3 weeks duration will be conducted for village *dais* at each Thana and Union Council.

24. The training programmes of medical and paramedical personnel will emphasize clinical contraception (IUD), and will at the same time seek to familiarize the trainees with methods of motivation for family planning and distribution of conventional contraceptives.

Publicity

25. All publicity media will be used and 52 mobile publicity teams will be employed. Each mobile unit will have a projector for showing films and slides.

Distribution of contraceptives

26. Contraceptives of all sorts including condoms, foam tablets, durafoam, jelly emko, diaphragms will be provided and sold at highly subsidised prices. The IUDs will be provided free. For the distribution of conventional contraceptives all possible sources of sale and distribution will be utilised including *dais*, shopkeepers, store-keepers, clinics, health centres, dispensaries, chemists.

Evaluation

27. Two Evaluation Units, one for each Province, have been provided for and will be included in the Central set-up. Each unit will have one Director, one Medical Officer, one Health Education Officer, one Statistician, one Tabulator and five interviewers. The units will review the programme continuously and suggest modifications and improvements where necessary.

28. It is estimated that in order to have any significant impact on the economic situation the family planning programme must aim to halve the birth rate in the next 25 years. This is a formidable task but is by no means impossible to accomplish, provided an all-out effort is launched in order to effect a break-through during the Third Plan period. The family planning programme included in the Third Plan will need to be implemented with the utmost vigour and single-mindedness if this break-through is to be achieved.

FINANCIAL IMPLICATIONS

(Million *rupees*)

	East Pakistan (1)	West Pakistan (2)	Centre (3)	Total (4)
Administration, Training and Research				
Central Headquarter	—	—	3.31	3.31
National Research Institute of Family Planning	—	—	2.65	2.65
Provincial Headquarters	2.22	1.91	—	4.13
Distt. Headquarters	2.03	4.51	—	6.54
Allowance to Medical Supdts. Civil Surgeons and Distt. Health Officers	0.16	0.35	—	0.51
Additional Staff for Distt. Health Officers and Civil Surgeons/Medical Supdts.	1.64	3.53	—	5.17
Family Planning Supervisors in West Pakistan	—	26.54	—	26.54
Thana Family Planning Officers in East Pakistan	11.55	—	—	11.55
Allowances to Union Council Secretaries in West Pakistan	—	4.62	—	4.62
Additional Staff for Thana Development Offices in East Pakistan	17.16	—	—	17.16
Training	4.39	3.90	—	8.29
Research-cum-Training	1.00	1.00	—	2.00
Contingencies (not elsewhere foreseen)	1.50	1.50	0.75	3.75
Total:	41.65	47.86	6.71	96.22
Materials & Incentives				
Jeeps	6.54	6.65	—	13.19
Publicity	6.13	6.13	—	12.26
Mobile Units	1.27	2.87	—	4.14
IUD Fee and Family Planning Doctors	10.88	10.87	—	21.75
Vasectomies/Tubeligations	2.25	2.25	—	4.50
Grants	—	—	4.30	4.30
Contraceptives	37.50	37.50	—	75.00
Urban Clinics	2.79	3.95	—	6.74
Existing Mobile Units/Touring Training Team	0.67	0.47	—	1.14
Family Planning Allowance to Part-time Family Planning Doctors	3.50	3.07	—	6.57
Equipment and Contingencies for Part-time Clinics	1.21	0.95	—	2.16
Salaries to Dais	21.87	14.58	—	36.45
Total:	94.61	88.29	4.30	188.20
Administration, Training and Research	41.65	47.86	6.71	96.22
Material and Incentives	94.61	88.29	4.30	188.20
Grand Total:	136 26	137.15	11.01	284.42

CHAPTER XVI

SOCIAL WELFARE

Development entails wide spread social changes which in turn affect the institutional frame-work of the society, its cultural patterns, and the social attitudes of different groups. When a society is confronted with the difficult task of choosing between emerging and old values, social tensions are bound to arise. A primary aim of development strategy should be to minimize these social tensions and to ensure a smooth and harmonious social and cultural transition.

II. SOCIAL PROBLEMS AND NEEDS

2. Social problems and needs in Pakistan are many and varied both in nature and extent. Some, like the breaking up of the family and with it of the traditional system of life, pertain mainly to rapid urbanisation. Others such as economic inequalities, physical incapacities relate to the need for intensive capital formation and acquisition of skills in a rapidly developing economy. Still others such as cultural conflicts and mental and emotional disorders arise from the challenge of adaptation and adjustment that must be faced in times of rapid socio-economic change. The by-products of the un-solved social problems are the economically deprived and physically disturbed persons. They handicap national development and burden the society.

3. As should be seen some of these factors and the problems arising from them have existed for ages (beggary, poverty, ignorance, disease, destitution, prostitution etc.), while others have cropped up as a result of change in the social structure and the attitudes and aspirations of people brought in by rapid economic and physical developments, an expanding communication system, educational advancement and the desire for emancipation of groups like women, students and employees in offices and industrial and commercial establishments. Besides, there are social needs which remain unmet in other areas of social development namely education, health and housing because of the shortage of resources. It is important to meet these needs for achieving comprehensive development, increasing productivity and promoting cohesiveness and health of the family and the community.

4. It has not been possible to quantify social problems and needs fully uptil now despite good efforts, because of their enormity and variety and because of the paucity of social researchers. However, with the information and data available, it is estimated that nearly 40,000 physical units of various sizes are required to be established in the country in order to meet all the social problems and needs. It is not possible to resolve all these problems in a span of five years. So it is proposed

to set up nearly 1,538 physical units covering practically every type of needed social welfare service throughout the country in the Thrd Plan. A statement of the total number of service units included in the Plan has been given with regional breakdowns in Annexure II.

III. PROGRESS DURING FIRST TWO PLANS

5. Social Welfare activity has been growing in the country for the last 10 years within the framework of our planned effort. The policy of the Government has been to develop social services simultaneously with economic and physical growth. However, inspite of this positive and correct approach, social needs that have been met and the social problems that have been tackled form only a meagre portion of the total needs and problems of social welfare.

6. In the First and Second Plan periods, the performance of social welfare included organisation and administration of social welfare activities at the public and private levels, training, research, urban community development, grants-in-aid to voluntary agencies, medical social work, child and youth welfare, recreational services for children and youth, delinquency and probation, rehabilitation and training of the socially and physically handicapped.

7. Of the First Plan allocation of Rs. 33 million for social welfare, not more than 25 per cent was actually spent. It was, therefore, not possible to establish even a nucleus base of social welfare services for future development. The programmes did not get down to the people. Most of the activities remained concentrated in the Centre. To make up for the short-falls, a sum of Rs. 85 million was provided in the Second Plan. The Schemes for providing services for children, youth, families and delinquents were added to the First Plan programme. A specific scheme of social service under Basic Democracies with an allocation of Rs. 35 million was also included to take the programme to the local level and more specifically to the rural areas.

8. Implementation during the Second Plan period has been satisfactory. In May 1962 the subject of social welfare was transferred almost entirely to the Provincial Government under the New Constitution. Since then the Provincial Governments have been able to build up their capacity reasonably well to organise and administer social welfare services. Directorates and Councils of Social Welfare were established and were staffed by trained professional social workers. The specific schemes included in the Second Plan have been fully implemented in East Pakistan; while nearly 77 per cent of the financial allocations have been spent in West Pakistan. The programmes of urban community development, medical social work, youth work and grants to voluntary agencies have been implemented in full. The private effort has grown about 20 times in the past decade (1955-65) under the impact of the two Plans. The number of bonafide private agencies of social

welfare has grown to about 4,000 as against 200 in 1955. However, the standard of services in these agencies is still low, a large number of them is confronted with organisational and financial problems. Moreover, due to the transfer of the central schemes to the Provincial Governments, a number of central schemes requiring establishment of model projects and pilot programmes, particularly in the field of child and family welfare, delinquency, training and rehabilitation of the socially and physically handicapped could not be undertaken in the Second Plan period for non-provision of funds in the annual budgets of the Provincial Governments. All these unimplemented programmes are proposed to be carried over to the Third Plan.

IV. POLICY OBJECTIVES

9. The specific objectives of the Third Five-Year Plan in the field of social welfare will be:

(*a*) to promote development process by reaching people and involving them in development tasks;

(*b*) to consolidate and expand existing preventive, curative and rehabilitative social services at all levels;

(*c*) to initiate new programmes to meet un-tackled needs and problems of individuals, families and communities.

10. In the First Plan period social work was mostly located in the Central Government offices and voluntary agencies of a national character. During the Second Plan it was proposed to be organized at the provincial and local levels but could only get down to the provincial level. In the Third Plan period, it is considered necessary to organise it in all the local bodies where it really belongs and where it is most beneficial. Thus, social service activity will form a regular function of the local bodies/basic democracies institutions both in urban and rural areas as envisaged in the Basic Democracies Ordinance. The organisational and administrative structure of the Provincial and Central Governments and voluntary agencies will be streamlined and strengthened. Besides governmental financing, every effort will be made to mobilize funds to meet social needs. Institutions like Zakat, Auqaf, Sadaqat, Khairat will be utilised to organise Community Chests Trusts and Charity Funds.

V. SIZE, PRIORITIES AND TARGETS

11. It is proposed to consolidate and expand the on-going programmes and initiate new ones by undertaking pilot projects in the several specialised fields of social welfare services in all parts of the country including the rural areas. Some of these programmes are also intended to be model demonstrations to the voluntary agencies and the local bodies in their specific areas, so that these agencies can

undertake large-scale programme on these patterns. The specific programmes of 'social services in rural areas', 'school social work', 'recreational services for the masses', 'social assistance' are being initiated in the Third Plan.

12. In financial terms the proposed programme represents the cost of physical targets proposed to be achieved in the Plan period. Expenditure estimates have been shown against each sub-sector in Annexure I while physical targets are given in Annexure II. It is estimated that nearly Rs. 171 million will be spent in the entire Plan period on social welfare activity both in the public and private sectors. Substantial sums of money will also be expended in organising social welfare services under the Works Programme.

Priorities and Targets

13. Social Welfare programmes are intimately inter-linked. As such fixation of priorities in this sector becomes difficult, especially when these programmes provide and tackle only small portions of the basic social needs and social problems of the people. However, in order to relate social welfare plans and programmes to the total socio-economic development effort functionally, the targets and goals to be achieved in this sector during the Third Plan are arranged below in such an order that promotional, developmental, preventive and rehabilitative programmes get priority over curative, remedial and palliative ones.

14. In all, 1138 physical units will be established in the public sector in the Third Plan period. Besides, 400 private agencies will receive financial assistance and professional help from Government through its National Council of Social Welfare. The physical targets and the financial allocations mentioned above have been worked out on the basis of social needs and problems as identified and ascertained in collaboration with the Provincial Governments and the premier private social welfare agencies of the country.

Organisation and Administration

15. *Centre.*—A nucleus professional administrative set-up for social welfare will be established in the Central Ministry for country-wide co-ordination, collation, legislation, international co-operation and grant-in-aid to private national agencies of social work and to Universities. The existing administrative arrangements are not working satisfactorily. It is proposed to raise the status of the Adviser, Social Welfare and to increase the strength of the professional staff in the Ministry.

16. *Provinces.*—The Second Plan had recommended the establishment of Directorates of Social Welfare in the Provincial Governments merging the secretariates and offices of a number of *adhoc* units which had been set up for implementation of social welfare plan during the First Plan period. This has since been accomplished in East Pakistan. In West Pakistan, the Secretariate of the Provincial

Council of Social Welfare and the Directorate of Social Welfare are working as separate bodies. Besides, the subjects of medical social work, social services for the physically handicapped and delinquents are dealt with in Departments of Health, Education and Home respectively. An arrangement to ensure co-ordination, supervision and evaluation of the entire work in the field of social welfare is urgently required in West Pakistan.

17. Social Work administrative units are proposed to be set up in the Basic Democracies institutions at sub-divisional levels in East Pakistan (58 units) and at district headquarters in West Pakistan (51 units) to take social work down to the people. These local body units will initiate and organise, control and supervise all kinds of social welfare services envisaged in the Third Plan within their jurisdictions. These units will be staffed by trained social workers.

18. Co-ordination of policies, plans and programmes, research and investigation, training and evaluation will be sought at all levels—local, provincial and national.

19. The Second Plan required that National and Provincial Councils of Social Welfare should function as advisory bodies to the respective governments. These bodies function as such in the Central Government and in East Pakistan. The West Pakistan Social Welfare Council, however, functions as an autonomous executive body. Some means will have, therefore, to be found to ensure proper collaboration between the West Pakistan Council of Social Welfare and the Provincial Departments concerned.

Research and Publications

20. The First and Second Plan recommended that due emphasis should be laid on systematic investigation, research and publications to provide factual knowledge about various aspects of social welfare for realistic planning and to facilitate education and training in social work. But nothing tangible was achieved in this respect. A specific programme of research and investigation has, therefore, been included in the Third Plan period. Also, social work will be given the widest possible publicity. Nucleus Research Centres will be established under the Central Ministry and Provincial Directorates/Councils and the University Departments of Social Work. In all 17 research projects will be undertaken (East Pakistan 10; West Pakistan 2; Centre 5). These will cover major social problems including those of orphans, beggars, vagrants, prostitutes, blind, deaf, dumb, delinquents, mentally deficient and the like. Results of the research studies will be published regularly.

Training

21. The demand for social workers for employment in social welfare agencies and related fields of activity like health (family planning in particular), housing, labour and education is increasing. Existing departments of social work in the

Universities of Lahore, Dacca, Karachi and Rajshahi provide training facilities at the B.A. and M.A. levels at present. These will have to increase their output by about 100 per cent. Training programmes in these University Departments will be further strengthened and made more service-oriented.

22. Social Work was introduced as an elective subject in colleges in the Second Plan period. It is proposed to expand this activity to another 20 colleges (10 in each wing) to provide personnel for lower category jobs as well as to serve as feeders to colleges and University Departments.

23. Specific Institutes/Centres for the training of Social Workers are also proposed to be established under the Departments of Social Work in collaboration with the Universities. Training opportunities for voluntary and in-service workers will continue as in the earlier Plan periods. It is expected to train nearly 2,000 workers to man planned programmes in social welfare, family planning and related fields.

Urban Community Development

24. This is an on-going priority programme of the First Plan which has been further expanded under the Second Plan. Basically, it is a multipurpose 'self-help' programme. It envisages the employment of trained social workers in community project areas to motivate, organise, help and guide the communities in the development process and thus establish schools, adult education centres, libraries, reading rooms, clinics, vocational training centres, industrial homes, and recreational places; to promote community hygiene, health, and sanitation; to fill ditches; to make streets; to organise recreational and cultural activities and arrange social assistance.

25. According to an estimate nearly 491 urban community areas (East Pakistan 106; West Pakistan 385) of 25,000 to 30,000 individuals each need community projects. Out of this 87 projects will have been established by the end of the Second Plan period, leaving a balance of 404 projects to be established ultimately. Resources being limited it will only be possible to establish another 65 projects—25 in East Pakistan and 40 in West Pakistan in the Third Plan period.

Social Services for Rural Communities

26. During the First and Second Plan periods, social welfare programmes were practically concentrated in urban areas. One basic reason for this was that the Village AID programme was already in progress when social welfare plans were instituted. Since social welfare development formed an integral part of the Village AID programme, social welfare sector kept out of the rural areas. However, the Village AID programme was replaced by Village Extension Services and given an agricultural-*cum*-industrial bias in its approach and implementation. The social service part of it was entrusted to the 'Basic Democracies Institutions' as required

in the President's Ordinance of Basic Democracies promulgated in 1959. It was for this reason that a scheme known as 'Social Services under Basic Democracies' was required to be formulated by the Provincial Governments for implementation during the Second Plan period. An *adhoc* allocation of Rs. 35 million was made in the Second Plan for this specific scheme. The scheme could not, however, be formulated mainly because the organisational and administrative structure of the Basic Democracies Institutions was evolving slowly. Some of these organisational problems have been overcome by now.

27. The total need for establishing Rural Social Service Units in the Third Plan is estimated at 5,400 units—(each unit can cover about 15,000 people). But in view of the limited human and material resources, it is proposed to establish only 500 social service units in the first instance (East Pakistan 300; West Pakistan 200). High priority will be given to this programme because of its promotional and developmental benefits. Funds will be provided from the Works Programme.

Professional and Financial Assistance to Voluntary Social Service Agencies

28. (*a*) This is an on-going programme and continues to be the major responsibility of the Central Ministry.

(*b*) Nearly 4,000 bonafide social welfare agencies (East Pakistan 2,500; West Pakistan 1,500) will be working in the field at all levels—local, provincial and national by the end of the Second Plan period. Quite a large number of agencies is expected to enter the field during the Third Plan period. Not all of them, however, are given financial help or professional guidance. So far, 600 agencies have received monetary grants and 1,000 have received guidance. A substantial increase over previous financial allocation for private agencies is being made in the Third Plan so as to provide a large number of them with financial assistance and professional consultation.

(*c*) National and Provincial Councils of Social Welfare were organised in the First Plan period to register agencies, give professional consultation and grant financial assistance to these agencies. At present most of the voluntary agencies are multi-functional. They cover a wide range of activities: relief measures; financial help; protection, care and training of orphans and widows; industrial homes; schools, libraries, adult education centres; family planning clinics, maternity homes, health centres; recreational activities for children. Only a few undertake specialised services for the socially and physically handicapped for which there is a great and urgent need. These will continue to function during the Third Plan period. Private agencies would be encouraged to improve the scope of their activities, raise their presently low service standards by employment of trained social workers as well as by getting their own workers trained.

Social Services for Children

29. Child Welfare figured prominently in the First and Second Plans but very little could be achieved in the form of services for lack of funds and a suitable organisational frame-work. The pre-school child and the out-of-school child still goes neglected in large and poor families and unsympathetic and congested communities. Only 15 social service units (East Pakistan 11; West Pakistan 4) have so far been established in the public sector. These comprise 'day-care centres for children of poor working mothers', 'baby homes for parentless infants' and 'multi-purpose centres'—providing food, clothes, assistance and recreational facilities. Till now the private agencies have borne major responsibility in this field mainly for the children without families and parents.

30. It is estimated that nearly 4,000 specific service units for children are required to meet the present needs. It is beyond national resources to meet these needs at the present stage. The Government will concentrate on initiating and organising 34 pilot projects (East Pakistan 12; West Pakistan 22) concerning various aspects of child welfare, and help the private agencies and communities to provide all kinds of services for children throughout the country on the model patterns set by it. In so doing the prominent child welfare agencies like the Pakistan Council for Child Welfare and its provincial counter-parts will be involved in making policies, plans and programmes. Other relevant departments dealing with children will also be involved. Technical and financial assistance has already been obtained from UNICEF to establish Training Institutes for child welfare in the two provinces. Further UNICEF assistance will be secured for the purpose.

Social Services for Youth

31. A programme of recreational services and productive activities for the youth was arranged in the Second Plan period envisaging the organisation of 20 service units, youth camps, youth hostels and youth centres for various youth activities. The purpose was to inculcate the dignity of labour in the youth and to prepare them for useful employment. But the effort was too insignificant to make an impact, although all the Second Plan targets have been achieved. Meanwhile the need for the programme has grown over the years and will continue to grow. In all nearly 750 service units are needed for serving the national youth. Government will provide 29 model ones, one in each district in East Pakistan and one in each Division in West Pakistan. Besides, the youth hostels, youth camps, Boy Scouts, Girls Guides and other organisations working in the field will be covered by the programme and will be given grants-in-aid for building youth hostels, organising camps, for establishing youth service centres and for undertaking other activities. Due encouragement and assistance will also be afforded to Universities, Colleges, Boards of Secondary Education and other voluntary agencies doing or capable of doing effective youth work. Special mention may be made of the useful work done by the East Pakistan Work Camp Association, Dacca, Pakistan Youth Hostel Association, Lahore and the Board of Secondary Education, Karachi.

All the three agencies need help and assistance which should be afforded in the form of substantial grants. The Board of Secondary Education, Karachi has an ambitious youth work project in hand, namely 'National Youth Centre.' This project will be duly assisted under the Third Plan.

Family Welfare Services

32. It is necessary to organise specific family welfare services for the preservation of the family institution against disintegrating forces released by rapid and large-scale urbanisation. The programme for family welfare services will include the initiation and organisation of family case work services, family counselling, social education of families, mother's clubs, socio-economic centres or industrial homes for women. In all 24 units will be organised in the Third Plan (6 in East Pakistan and 18 in West Pakistan). Voluntary welfare agencies like the All Pakistan Women's Association will be supplementing the service substantially.

Medical Social Work

33. The usefulness of medical social work is recognised throughout the world for its preventive and curative benefits. It cuts returns to hospitals; prevents spread of disease and breakdowns in patient's family; makes medical treatment more meaningful and effective; undertakes rehabilitation of the patients; motivates community action for the benefit of patients; and undertakes patient's after-care. It is an ongoing plan programme. Uptil now 24 projects have been organised in as many hospitals against a total need for 650 such units. Another 60 new units will be established in the Third Plan: 30 in each of the two provinces.

School Social Work

34. Social work is practised both in primary and secondary settings. One of the important secondary settings, where it should form an integral part of total activity, is the school. In many schools, however, the teachers are so over-worked and so much under-paid that they do not take any interest in the child's life beyond giving him book lessons and do not look into the problems of absentism, failures, truancy, gangsterism, delinquency, parents resistance or apathy with a view to help and guide the child. Some of the parents are either too busy or are lacking in the ability to take proper care of the child. Thus, the home-school relationship, which is of vital importance to the school child, is not established. In view of these considerations, it is proposed to establish a new service known as 'school social work' in secondary schools, colleges and universities. It is intended to appoint trained social workers, conversant with specialised case-work and group work skills and techniques, in the educational institutions to help and guide the students in their educational life; to prevent breakdown in their school career; to find economic assistance when needed; to help in the development of their personalities and in home adjustments; to facilitate teacher's work; to promote parent-teacher relationships and to prevent truancy and delinquency among students. Nearly 40 units will be established in an equal number of schools and colleges in East Pakistan.

Recreational Services for Masses

35. It is proposed that arrangements for providing recreational facilities should be made for the benefit of the common man, primarily in urban areas. Such a programme should envisage provision of parks, sports and games centres; play-fields; arenas (*akharas*); and organisation of cultural shows, displays, exhibitions, *melas* and other such activities. The programme is proposed to be initiated under the Urban Works Programme of the Third Plan through the organisation of 29 major recreational service units. These will serve as model projects. The Basic Democracies and Voluntary Organisations are expected to participate in carrying and supplementing the programme.

Social Services for the Socially and Economically Handicapped

36. It is common knowledge that quite a substantial portion of the population is socially and economically handicapped even according to our own living standards. They have reached a stage of economic depravity and social degradation which is not only detrimental to the interest of the individual concerned but also constitutes a major social ailment in the society. The unprotected and un-cared-for orphans, the neglected widows, the vagrants, the destitutes and the beggars, the families without support, fall in this category. Their influence and impact on the community is unwholesome. It is possible to reclaim and train most of them to lead a normal life. Only a few become so morally degraded and socially degenerate that they lose all sense of human dignity and adopt a professional attitude towards begging, vagrancy and destitution. It will require a large number of institutions and service units to meet the total needs in this field. The Government will establish 33 model institutions and pilot projects (18 in East Pakistan; 15 in West Pakistan) provide training facilities to professional workers, conduct relevant research studies and provide needed legislative measures. The private agencies and local bodies will provide the country-wide services and set-up needed institutions with governmental help.

Orphans

37. Amongst these groups, orphans are the most educable and reclaimable. Care of the unfortunate, neglected, dependent and unprotected children and adolescents is perhaps one of the oldest social services and religious obligations that have continued for centuries in the sub-continent. But the conditions of service are far from satisfactory. These have improved during the last decade under the influence of professional social work, thought and practice. But adequate functioning of these institutions so as to provide an opportunity to the individual orphan to develop himself into a wholesome personality, a responsible citizen and an economically productive unit, is still a far cry. Charity needs to be blended with scientific methodology to make good citizens out of these unfortunate persons. The stigma of the 'orphanages,' its 'feasts', 'uniforms', and 'fund-collection through

singing orphans' must go. As a step towards that two provincial Governments have already set up Training Institutes for Child Welfare with initial financial and technical assistance from UNICEF to train workers for the orphanages. The training programme of these institutes will be further enhanced and continued in the Third Plan period.

38. The 'Orphanages' need to be converted into healthy and happy homes and training centres for the children instead of being mere abodes for the unfortunate and neglected. There are nearly 500 known orphanages in the country running on a voluntary basis. The number of their inmates varies between 40 to 400 per orphanage. Very few of these agencies, however, provide dignified living, education and training to the unfortunate orphans. It will need money and effort to change their operating conditions. The Councils' programme of financial assistance and professional help of these institutions will continue in the Third Plan as well. But the consultation part of it will be intensified and supplemented by regular inspection and supervision by field officers. The model institutions to be set up by the Government will provide field-training in child welfare work to social workers in collaboration with and under the guidance and supervision of the Training Institutes for Child Welfare set up in the Second Plan period. 'Special Committees' are recommended to be organised under the Directorates of Social Welfare to specifically manage and supervise the affairs of the orphanages in each province. The committee may comprise a senior government official of the Directorate, representatives of the orphanages, voluntary social workers and industrialists. A number of orphanages is run by the Provincial Government in East Pakistan. A beginning was made to improve conditions in these institutions during the Second Plan period. This work will be continued in the Third Plan period.

Widows

39. By and large widows in our society are looked after by the relatives: the widows' parents or in-laws or the grown-up children. Sometimes a community may also take care of the older widows. Young widows are helped to re-marry. Still a number of illiterate women, especially in the middle-age group, often go without support. Some of them are unable to work even as domestic servants to earn a living. Most of them can be helped and trained to be self-supporting. Social Assistance programmes for such widows were included in the Second Plan but remained unimplemented for lack of funds. A number of projects for the protection, care, training and rehabilitation of the widows without support will be initiated by the Government under the Directorates of Social Welfare. These pilot projects will serve as models to the private organisations for undertaking large-scale services.

Old-aged

40. The family or the community usually assumes responsibilities for the dependent old-aged person. But many have none to care for them and become

beggars. Unfortunately the number of the old-aged persons without support is increasing. Many of them can be trained to do useful jobs. There is practically no private effort in this direction. Provincial Governments will establish six model institutions (4 in East Pakistan; 2 in West Pakistan) for their care, protection, training and rehabilitation and will try to motivate private effort in the field.

Beggars, Vagrants, Prostitutes

41. These categories of the socially handicapped are already well-identified. No survey has so far been carried out about their numbers and specific problems and needs. Such a countrywide survey is urgently needed and can best be conducted by the Central Ministry of Social Welfare. Nothing practical has so far been done to meet the problem and prevent its further growth. On the contrary both the community and the Government have so far avoided to tackle the problem in right earnest till lately when specific legislation, banning prostitution and anti-vagrancy laws have made it necessary to provide training and rehabilitation services for these groups. At present there are only four homes for the destitute, two in each province. Even these are not well equipped and do not provide for any extension services. It is proposed to set up 19 homes (16 for beggars, 3 for prostitutes) and community extension service units. Ideally, each district authority and municipal committee should set up one training institution with facilities of extension services for the beggars, vagrants and others.

Social Services for the Physically and Mentally Handicapped

42. This is another on-going plan programme. Specific schemes for the protection, care, rehabilitation and training of the blind, deaf and dumb, otherwise disabled, and the mentally retarded were included in the First and Second Plans both in the private and public sectors. It was intended that model institutions in each of these fields would be established by the Government for demonstration to the voluntary agencies who would undertake similar programme on a large-scale. Experience has shown that most of the private organisations cannot tackle these problems on their own. They do not have the requisite funds, the equipment and professional knowledge to undertake these highly technical and professional welfare activities. By now only 9 institutions have been established in the country. It has been established that it is possible to make most of the physically handicapped self-supporting. As their number runs into hundreds of thousands (according to an estimate nearly 2,500 service units each comprising 100 to 300 cases are required for all categories at present) and as the existing services for their benefit are insignificant, it is proposed to undertake a pilot programme for their training and rehabilitation during the Third Plan period. 40 model institutions (East Pakistan 25; West Pakistan 15) supported by outdoor extension services, will be established in the Third Plan. Private agencies will supplement governmental efforts and collaborate in the training and rehabilitation programmes. These

programmes will comprise education (in Braille for the blind) and vocational training in simple professions. Foreign assistance from UNICEF and some other international agencies will also be sought.

The Blind

43. According to surveys and approximations made by different experts and agencies in the field there are about 500,000 blind persons in the country. But there are only three institutions of note capable of having nearly 50 to 60 persons at a time. These institutions provide boarding, lodging, education, vocational training, work and employment opportunities for the blind. Limited number of day-scholars are also accepted. Besides, a good number of blind males are protected and trained in religious 'maktabs' and mosques as 'Hafiz-i-Quran'. Experience has shown that through training and education the blind persons can earn a reasonable living. But the existing training facilities being inadequate, their employment becomes difficult. Therefore, provision of intensive training, sheltered workshops and commercial centres is also needed. It is believed that blindness is still on the increase in the country due to lack of personal hygiene and health education amongst the masses and inadequate hospital and clinical facilities for treatment of eye diseases. Measures will be taken under the Health sector to cure eye diseases and prevent blindness. Location, training and rehabilitation of the blind will continue to be dealt by the Social Welfare sector. Facilities (like tailoring, leather works, weaving, button making, etc.) in the existing institutions will be strengthened and another 27 (East Pakistan 17; West Pakistan 10) integrated schools/institutions for the blind will be established by the Provincial Governments during the Third Plan period. The collaboration of private agencies working in the field would be sought particularly to facilitate location of the blind and their rehabilitation.

Deaf and Dumb

44. By now six centres for the deaf and dumb have been established, 4 in East Pakistan and 2 in West Pakistan. These centres provide training in different trades and vocations. Experience has shown this category of the handicapped persons to be most trainable and capable of becoming economically productive. It is proposed to continue this programme in the Third Plan period. Another 5 institutes (East Pakistan 2; West Pakistan 3) for the deaf and dumb will be established at centrally located places.

Social Services for the Disabled

45. Existing services for the disabled are insignificant. Although no survey has so far been carried out about the population of the crippled and disabled in the country, their number is estimated to be large enough to justify the establishment of 5 institutions/sheltered workshops with extension services for rehabilitation (East Pakistan 4; West Pakistan 1) during the Third Plan period. It is proposed

to conduct a survey of the disabled through the district authorities in the first year of the Third Plan period. Due attention will also be given to the training and rehabilitation of disabled veterans.

Mentally Handicapped

46. The modern complex age has some times been called the age of emotional disturbances and mental conflicts. According to the Superintendents of the Mental Hospitals in Lahore and Hyderabad the number of neurotics, psychotics, schizophronics, mentally ill, mentally deficient and mentally retarded is on the increase. The strains and stresses of economic and industrial life, conflicting social and moral values, cultural lags and like factors very often lead to mental disequilibrium. If such a state is not properly treated, a 'fixation' takes place leading to perpetuation of the infirmity. Some mental diseases are also caused by injuries sustained at the time of birth. Others develop due to various other physical causes. Together, all these categories of the mentally handicapped call for protection, care, treatment as well as training, rehabilitation and follow-up of educable and trainable cases. But only lunatics of an unmanageable and aggressive category are housed in the mental hospitals run under health departments. Some others are treated as outdoor patients. There are no arrangements for other categories particularly the mentally retarded, a number of whom are educable. To make a start 3 model institutions (East Pakistan 2; West Pakistan 1) for the mentally retarded will be established under the Provincial Directorates of Health or Social Welfare during the Third Plan period. Social workers will be employed to provide necessary help and guidance to the patients as well as to their families and particularly for their adjustment within the institutions and in the families and for the follow-up. The Pakistan Institute of Mental Hygiene and the Pakistan Association of Mental Health are making some attempts to educate public opinion and conduct surveys about the incidence of mental illness.

Social Services for Delinquents

47. Rapid increase in industrialisation and the consequent process of urbanisation, along with various other social and psychological factors, have increased the rate of delinquency in the country, particularly among the juveniles. The need for counselling and guidance is urgent. There are many adolescents and youths without healthy occupations in schools and colleges and in the community, who are forced by circumstances and opportunities to indulge in unsocial and immoral activities and who join gangs and racketeers, pick-pockets, and similar other groups.

48. Till the beginning of the Second Plan this subject was dealt with under jails. Later it was agreed to treat it as a social problem. Specific schemes for the establishment of 'juvenile courts', 'remand homes', 'training and rehabilitation institutes for juvenile delinquents' and 'after-care of prisoners' were prepared by

the Central Ministry of Social Welfare and later transferred to Provincial Governments. But none of these except the last mentioned have been undertaken for lack of funds. There is a total need of nearly 315 service units of about 100 cases each for delinquents in the country as a whole. But resources are limited. Only 18 social service units for delinquents (East Pakistan 13 and West Pakistan 5) comprising juvenile courts, remand homes, training and rehabilitation centres, probation and after-care services will be established in the Third Plan period.

Social Assistance Units

49. A programme for providing social assistance to individuals and families without support or any means of livelihood like the unemployed, the indigent, the needy, the diseased, the neglected and the dependent is necessary for preventing them from joining the corps of beggars. An essential concomitant of this programme is provision of case work services through which rehabilitation of the assisted individuals and families becomes possible. Twenty nine social assistance units (East Pakistan 17; West Pakistan 12) will be established during the Third Plan period in big cities. It is suggested that full utilisation of the religious institutions of Auqaf, Zakat and other charities should be made for mobilisation of financial resources to supplement the programme.

Staff Welfare Services

50. Another group of people which has not been duly provided with social welfare services comprises the bulk of government employees. Government is the largest employer in the country. It has to provide a model to industrial, commercial and other employers by providing adequate facilities for education, health, housing, transport, recreation and training to its employees. Consideration needs to be given to the institution of social security system for government employees. The activities of the existing staff welfare and benevolent funds in the respective governments can be enhanced and strengthened to provide needed social services. It is proposed to establish nearly 20 service units like community centres, consumers' stores, industrial homes for women and recreational centres for children and youth under the Central Government. The Provincial Governments will continue and expand their existing programmes.

International Co-operation

51. Technical co-operation and assistance has been received in the public and private sectors from the United Nations (UNBSA, UNICEF, etc.), and other international agencies. Most of it has been in the form of equipment, transport and supplies from UNICEF for the specific programmes of 'urban community development' and 'child welfare' as well as from UNBSA in the form of consultative services of social work experts. Such assistance will be negotiated and channelised through proper departmental and ministerial authorities. Experience has shown that otherwise assistance is likely to be delayed or denied.

Employment of Professional Workers

52. Nearly 500 professionally trained social workers are working in the field. The shortage of trained workers has been a big limiting factor in the expansion and improvement of the standard of services. Attempts will be made to train and employ professional social workers on all professional jobs, including administration of social welfare services. Such a policy is expected to make the programme more useful and the services more effective. It is estimated that about 2,000 workers will be required to man the plan programmes for social welfare. They will be trained in the University Departments of Social Work and through in-service courses which will be designed especially for the purpose.

Financing

53. In all nearly Rs. 171 million will be utilised for development of social welfare services both in the public and private sectors of the Plan. The direct public sector for social welfare development envisages an expenditure of Rs. 131 million (East Pakistan 66; West Pakistan 40; Centre 25). Besides, substantial sums of money will be spent under the Works Programme. Another sum of Rs. 40 million is estimated to be mobilised and spent by voluntary social welfare agencies during the Plan period. A region-wise and programme-wise distribution of expenditure is shown by executing authorities in Annexure I. It is also expected that every effort will be made to mobilise community funds to meet social needs. Institutions like community chests, trusts and charity funds will be organised.

ANNEXURE I

FINANCIAL ALLOCATION FOR SOCIAL WELFARE

(By Executing Authorities and Regions)

(Million Rupees)

Sl. No.	Sub-Sector	East Pakistan	West Pakistan	Centre	Private	Total
1	2	3	4	5	6	7
1.	Administration	1.10	0.75	—	—	1.85
2.	Research and Publication	0.50	0.40	—	—	0.80
3.	Training	2.60	2.50	—	—	5.10
4.	Urban Community Development	*	7.50	—	—	7.50
5.	Social Services for Rural Communities	*	*	—	—	*
6.	Financial and Professional Assistance to Voluntary Agencies, Universities, Colleges	—	3.50	20.00	—	23.50
7.	Social Services for Children	4.80	4.00	—	5.00	13.80
8.	Social Services for Youth	—	0.50	—	2.00	2.50
9.	Social Services for Families	4.00	3.00	—	5.00	12.00
10.	Medical Social Work	1.50	1.50	—	—	3.00
11.	School Social Work	2.00	—	—	—	2.00
12.	Recreational Services for Masses	*	*	—	—	*
13.	Social Services and Model Institutions for Social and Economically Handicapped	22.50	6.75	—	18.00	47.25
14.	Social Services and Model Institutions for Physically Handicapped	14.50	6.00	—	10.00	30.50
15.	Social Services for Delinquents	7.50	2.00	—	—	9.50
16.	Social Assistance Units	*	*	—	—	*
17.	Staff Welfare Services	—	—	5.00	—	5.00
18.	Carry over from the Second Plan with Capital Costs only	5.00	1.60	—	—	6.60
	Total:	**66.00**	**40.00**	**25.00**	**40.00**	**171.00**

*Financial allocations for these programmes have been provided under the Works Programme.

ANNEXURE II

PHYSICAL TARGETS OF SOCIAL WELFARE SERVICES

Sl. No.	Sub-Sector	East Pakistan	West Pakistan	Centre	Total
1	2	3	4	5	6
1.	Administration	58	51	1	110
2.	Research and Publication	10	2	5	17
3.	Training	18	17	—	35
4.	Urban Community Development	*50	70	—	120
5.	Social Services for Rural Communities	*300	*200	—	*500
6.	Financial and Professional Assistance to Voluntary Agencies, Universities, Colleges	—	—	400	400
7.	Social Services for Children	12	22	—	34
8.	Social Services for Youth	17	12	—	29
9.	Social Services for Families	6	18	—	24
10.	Medical Social Work	30	30	—	60
11.	Recreational Services for Masses	*17	*12	—	*29
12.	School Social Work	40	—	—	40
13.	Social Services and Model Institutions for Socially and Economically Handicapped	18	15	—	33
14.	Social Services and Model Institutions for the Physically Handicapped	25	15	—	40
15.	Social Services for Delinquents	13	5	—	18
16.	Social Assistance Units	*17	*12	—	*29
17.	Staff Welfare Services	—	—	20	20
	Total:	631	481	426	1538

*Financial allocations for these programmes have been provided under the Works Programme.

Part III

PHYSICAL INFRASTRUCTURE

ANNEXURE I

PHYSICAL TARGETS OF SOCIAL WELFARE SERVICES

S. No.	Sub-Sector	East Pakistan	West Pakistan	Centre	Total
1	2	3	4	5	6
1.	Administration	[illegible]	[illegible]	1	[illegible]
2.	Research and Publication	10	2	3	15
3.	Training	20	15	—	35
4.	Urban Community Development	100	50	—	150
5.	Social Services for Rural Communities	*300	*200	—	*500
6.	Financial and Professional Assistance to Voluntary Agencies, Universities, Colleges	—	—	400	400
7.	Social Services for Children	[illegible]	[illegible]	—	[illegible]
8.	Social Services for Youth	17	17	—	34
9.	Social Services for Families	[illegible]	[illegible]	—	[illegible]
10.	Medical Social Work	[illegible]	[illegible]	—	[illegible]
11.	[illegible]	[illegible]	[illegible]	—	[illegible]
12.	School Social Work	30	—	—	[illegible]
13.	Social Services and Model Institutions for Socially Handicapped	18	15	—	[illegible]
14.	Social Services and Model Institutions for the Physically Handicapped	25	15	—	40
15.	Social Services for Delinquents	13	5	—	18
16.	Social Assistance Units	*15	*12	—	*27
17.	[illegible] Welfare Services	—	—	20	20
	Total	632	481	426	1539

*Financial allocations for these programmes have been provided under the Works Program

CHAPTER XVII

WATER AND POWER

1. Development of Pakistan's water and power resources is an integral part of the rapid progress being planned for agriculture and industry during the Third Plan period. At these early stages of economic growth, investments, and the return on them, depend very largely on whether an adequate and timely supply of water is available to agriculture, and whether there is sufficient low-cost power to lead industrial development. The importance of water and power facilities, therefore, cannot be overstressed.

WATER DEVELOPMENT

2. The present position and the resource potential of water are quite different for the two Provinces. In East Pakistan, a flat deltaic area with a network of some of the world's largest rivers, there is always either too much water on the land or too little. In West Pakistan, which is largely an arid land overlaid with an elaborate network of canals, there is seldom enough water, and the thin spreading of water on flat alluvial lands with poor natural drainage has added to the problems of salinity, alkalinity, and waterlogging. Effective use of water, therefore, raises different types of problems which must be treated separately in each of the two Provinces—flood control and drainage in the summer and irrigation in the winter for East Pakistan, and storage, groundwater irrigation, and treatment of waterlogging and salinity in West Pakistan.

WATER DEVELOPMENT—WEST PAKISTAN

Resource Potential and Problems

3. Out of the total land area of nearly 200 million acres in West Pakistan, only about 40 million acres are cultivated and 27 million acres are presently irrigated from an immense network of canals which runs throughout the Indus Basin, and from wells which tap a large underground aquifer. In spite of this extensive irrigation system, the cropped area is overextended and water remains a limiting factor in the growth of agriculture; its scarcity is a major reason for increasing salinity, poor yields and low cropping intensities.

4. Fortunately, however, there is a large potential for expanding the supply of water. At least 25 million acres feet (MAF) measured at the irrigation water course head of surface-water, can be added to the 60 MAF now being used. To capture this potential, most of which flows to the sea, it will be necessary to modify and enlarge canals and to erect surface storage facilities. Many of these projects will be difficult, time consuming and costly, but during the course of twenty years or so, such development will be possible.

5. Of perhaps even greater potential, is the water development that can come from the aquifer which underlies much of West Pakistan. This underground reservoir, which has been filled by rain percolation and by canal and river seepage, is one of the great natural resources of Pakistan. It is estimated that, in 1964, some 8 MAF of groundwater was used. Complete groundwater inventories, begun on an intensive basis only a few years ago, are still to be made final. While the quality and useability of this groundwater varies considerably by area, preliminary analyses for the 1963 Master Plan indicated that some 40 MAF per year of water may ultimately be available for irrigation purposes. More recent studies indicate that a substantial volume of additional groundwater can be recovered from river seepage induced by pumping in areas near the rivers. Indications are that this added recharge may amount to as much as 15 MAF per year of which some two-thirds constitutes a new addition to the irrigation water availability. However, at this stage of investigation a volume of 40 MAF per year has been used in the water budget in Table 1. Induced seepage from canals can also add to the total volume of irrigation water. But induced canal seepage is possible only in periods of excess surface flows and if canal capacities are adequate. Maximum ultimate water course availability is estimated to be about 115 MAF per year in the 1963 Master Plan. With the additional groundwater recovery, the ultimate annual supply may be as high as 125 MAF.

TABLE 1

IRRIGATION WATER POTENTIAL—WEST PAKISTAN

Ultimate	(1985)	Water Course Availability	...	115 MAF/yr
		From Surface Water	...	(75 MAF)
		From Ground Water	...	(40 MAF)
	1959/60	Water Course Availability	...	58 MAF/yr
		From Surface Water	...	(58 MAF)
		Per cent of Potential	...	50%
	1964/65	Water Course Availability	...	68 MAF/yr
		From Surface Water	...	(60 MAF)
		From Ground Water	...	(8 MAF)
		Per cent of Potential	...	59%
	1969/70	Water Course Availability	...	90 MAF/yr
		From Surface Water	...	(62 MAF)
		From Ground Water	...	(28 MAF)
		Per cent of Potential	...	78%

N.B.—The water availabilities are based on certain assumptions as to possible physical works, losses, etc. and further that canal and water course losses will continue to remain of the same magnitude and even no artificial means, such as lining, hereafter will be adopted to reduce these. Account has also not been taken of present as well as future productivity of ground waters.

Water Development under Second Plan

6. In West Pakistan the substantial progress in water development during the Second Plan period has been a major factor in the greatly improved agricultural performance. Work was begun on reclamation and development of over 8 million gross acres. Of this, the Water and Power Development Authority (WAPDA) provided about 3 MAF per year on about 1.6 million acres in the northern zone of West Pakistan. In the first Salinity Control and Reclamation Project area of 1.2 million acres about 2,000 public tubewells are in use. After the third year of opo-

ration, cropping intensities in the region were up about 25 to 30 per cent, crop yields were up by about 25 per cent, and the water table, which originally was damagingly high, was lowered about 7 feet. Such reclamation and development results provided considerable hope for the future.

7. A second important, and indeed surprising, element in recent water development has been the large increase in water supplies that has come from privately installed tubewells. Over 30,000 of these wells have been installed to date, and it is estimated that they helped supplement water on some 3 million irrigated acres by providing an additional 5.0 MAF of water. This water, as in the case of that from the public tubewells, has been of special importance since its supply is independent of rainfall and river flow, and it is available at critical times during the agricultural production period.

8. In addition to the groundwater development during the Second Plan, there has been substantial progress on surface diversions. Irrigation work begun by the Irrigation Department was continued by the Agricultural Development Corporation (ADC) on some 1.8 million commanded acres in the Ghulam Mohammad and Gudu Barrage commands of the southern zone. Numerous other smaller irrigation projects were also undertaken outside the Indus Basin which accounted for another 1.5 million acres. (*See* Table 2.) In total, therefore, irrigationwater availability was increased by over 15 per cent during the period.

TABLE 2

GROSS AREAS SERVED BY IRRIGATION AND RECLAMATION PROJECTS DURING THE SECOND AND THIRD PLANS

Name of the Project	Gross Served Area			
	Second Plan		Third Plan	
	New Area	Old (already cultivated) Area	New Area	Old (already cultivated) Area
	……Thousand Acres……			
Completed Schemes:				
Rechna Doab (SCARP 1)	200	800	—	—
Rawal Dam	4	8	—	—
Sub-Total:	204	808	—	—
Continuing Schemes:				
Chaj Doab (SCARP 2)	100	300	200	1,500
Gudu	—	500	376	1,500
Warsak Canal	5	10	75	—
Taunsa with Extension	67	400	183	700
Thal	250	—	350	—
Kurram Garhi	—	60	84	52
Ghulam Mohammad	700	600	350	200
Small Dams	—	20	—	51
Small Schemes:				
(a) Quetta Region (b) Frontier Region (c) Others	—	600	—	1,200
Flood Regulation	—	500	—	1,000
Sub-Total:	1,122	2,990	1,618	6,203

TABLE 2—*contd.*

New Schemes:				
Banda Tanda	—	—	—	20
Karachi Irrigation	—	—	44	15
Khanpur	—	—	—	70
Talli Tangi/Babar Katch	—	—	20	—
Naulang	—	—	30	—
Nara Pumping	—	—	—	150
Mianwali Lift Irrigation	—	—	40	—
Gomal	—	—	120	—
Nari and Tali	—	—	60	—
Other Schemes	—	—	50	50
Private Tubewells	500	2,500	1,000	4,000
Northern Zone, Drainage & Reclamation	—	—	1,000	4,600
Southern Zone, Drainage & Reclamation	—	—	—	2,500
Sub-Total:	500	2,500	2,364	11,405
Total :	1,826	6,298	3,982	17,608

9. A significant accomplishment of the Second Plan has been unprecedented increase in hydrologic, engineering, and agricultural information on the Province. The work of a number of leading Pakistani scientists in several different agencies has been supplemented by contributions from many of the world's most able land and water specialists. This work has produced a host of background papers, master plans, and project reports which will serve as an invaluable aid to future water development.

10. The substantial progress made in West Pakistan water development during the Second Plan, and the considerable potential that still exists, is not intended to imply that all water problems have been answered. Many important issues are yet unresolved, such as optimal integration of public and private water development, proper mixing ratios of groundwater and surface water for alkalinity and salinity control, optimal water rate policies, saline effluent disposal, inter-regional allocation and co-ordination of water deliveries, etc. These and other questions will continue to demand heroic efforts from Pakistan's and the world's leading experts during the Third and later Plans.

Objectives and Strategy for the Third Plan Water Programme

11. It is against the past progress, the present problems and the remaining potential outlined above for West Pakistan that the Third and Perspective Plan objectives and strategy have been formulated. In broad terms, the Third Plan objectives are to maximize the relatively easy development of sweet groundwater in the Province through an expanded and integrated public and private tubewell programme, to begin work on a canal modification and enlargement scheme that

will allow a greater proportion of the river flow to be utilized, and to increase the investigation, research, engineering, co-ordination and master planning efforts required to provide an adequate technical and economic base for later and more difficult surface water and saline-groundwater development. These objectives are designed to provide the most rapid possible development of the water potential and to support the sharp increase in agricultural production detailed in Chapter 20.

12. In more specific terms, the objectives are to have WAPDA undertake responsibility for reclamation and irrigation development of 9.8 million commanded acres, 7.3 million in the northern zone, and 2.5 million acres in the southern zone; to have ADC complete irrigation development and the initial phase of drainage in some 2.4 million acres (net) mainly in the southern zone; to have an accelerated private tubewell programme to provide incremental water on some 5 million acres, mostly in the northern zone; and to undertake numerous smaller irrigation and reclamation projects outside the Indus Basin. (*See* Table 2.)

13. The objectives for the Third Plan call for an increased watercourse availability of some 22 MAF, an increase of about one-third over present water supplies. This total would be made up of 14 MAF of groundwater developed by WAPDA, about 6 MAF from private tubewell development, and an additional 2 MAF from the various surface-water supplies. Present indications are that these targets may be exceeded by as much as 30 per cent. The demand for water is very great, groundwater is relatively inexpensive, and with a maximum public-private programme, more can be achieved than is shown in Table 1. Nevertheless, to be conservative, the lower figures have been adopted.

14. In addition to the greatest feasible development of fresh groundwater, the Third Plan will also see the beginning of the programme for canal modification and surface storage.

15. During the Fourth Plan, the objectives will be to further develop the groundwater resources, to provide maximum diversion from the rivers, to engineer the development of all other surface storage locations and to proceed with the maximum development of surface storage as rapidly as the engineering permits.

16. Thus the programme objectives outlined above call for full development of non-saline groundwater during the Third and Fourth Plans, and full development of surface storage potential as rapidly as engineering permits during the Third, Fourth and following Plans. The areas with saline ground water will be developed mainly during the 4th and 5th Plan periods in conjunction with surface water storage development although a start may be made on these areas in the latter part of the Third Plan.

17. There are several elements of strategy which underlie the above set of objectives that should be made explicit at the outset. Of particular importance is the extent of present knowledge about water development parameters for West Pakistan. In developing the massive water programme, the Government has drawn upon the experience and knowledge of experts from many countries. Nonetheless,

the problems are of extraordinary difficulty and complexity. Many of them—particularly those dealing with intensely saline and alkaline groundwater—are yet to be solved. It will be at least two or three years before the accumulation of data and further engineering can provide the detail necessary for a complete master plan for the development of the entire Indus Basin, or even for important regions of it.

18. On the one hand Pakistan cannot afford to wait, until a fully articulated Master Plan is developed before proceeding with any projects and on the other hand, she cannot afford to jeopardise the effective use of the total water supply in a way which helps one area only at the expense of another. Under these circumstances, the intelligent course is (*a*) to proceed as rapidly as possible with the development of areas, essentially the non-saline groundwater areas, which can be developed economically, which have short gestation periods, and which do not jeopardise the development of the Basin as a whole, and (*b*) to press as rapidly as possible the engineering attack upon the more difficult areas. This, then is the general strategy that underlies the objectives outlined above.

19. There is one further aspect of the strategy of the West Pakistan programme which deserves special comment. Construction of private tubewells has been accelerating rapidly and it is now estimated to be running at 6,500 per year, of which about two-thirds are diesel operated. The rapid development of private tubewells now requires a new tactic—a strategy of public—private development. It is proposed to give the development of private tubewells every assistance in the form of imports, credit and electrical connections. With such assistance, some 40,000 new tubewells can be expected during the Third Plan period. The development of these private tubewells will proceed side by side with the development of the public tubewells, areas for each being determined with phased priorities. To achieve the maximum possible water development, care will be taken that the public programme is sufficiently flexible to minimize adverse effects on private development. Care will also be taken to insure that the private development does not lead to a less than optimal ultimate development of the Basin, to an inefficient use of public resources or to major social inequities. This new strategy has the great advantage of mobilizing the full energies of individual farmers to supplement the resources and skills of the public agencies.

THIRD-PLAN PROGRAMME

Investigations, Surveys and Research

20. One of the features of the West Wing water programme that has allowed it to proceed rapidly in the past, has been the willingness to devote considerable time, energy and resources to the collection and analysis of data. This effort will be expanded during the Third Plan period. Emphasis within WAPDA will center on co-ordinated regional and master planning, project planning, and the gathering

of basic information relevant to water development. Research in hydraulics and soil mechanics conducted under the auspices of the Irrigation Research Institute in its laboratories at Lahore, Karachi and Nandipur will also be strengthened during the next five years.

21. Investigations on the quality and availability of ground water, on soils and on interaction of soil and water have been intensified during the Second Plan period. The need for expanding these studies, however, has become increasingly clear. Sufficient experience is not available on reclamation of highly salinized soils and the use of marginal-quality ground waters for irrigation purposes.

Of particular importance during the Third Plan Period will be:—

(1) enlarging the soil, water and agricultural monitoring programmes in existing SCARP areas,

(2) establishing a control project in a small area, the Mona research project, to

  (*a*) develop methods and procedures to achieve effective use of water and land, the reclamation of saline and alkaline land, and agricultural development,

  (*b*) conduct detailed ground water hydrologic studies to determine the effect of groundwater reservoir management, water quality changes, and tubewell performance;

(3) initiating further quantitative studies on stream flows and groundwater availability;

(4) refining groundwater and mixing ratio investigations;

(5) providing additional studies on the interaction of soils and water in West Pakistan;

(6) Training of personnel.

Irrigation, Drainage, Reclamation and Flood Protection.

22. A variety of surface-water projects will be completed or undertaken during the Third-Plan period. The Gomal Zam and Kurram Garhi multipurpose projects started in the Second Plan will be completed before 1970, and work on the Hingol project will begin during the period. In addition, the ongoing schemes of Warsak High Level Canal, Taunsa Barrage, Kotri Barrage, Tanda Dam, Khanpur Dam, Karachi Irrigation Project, and Nara Pumping Scheme will be completed.

23. The capacity of a number of canals and branches will be increased during the Third Plan to permit greater diversions from the rivers, and to allow for coordinated water management in tubewell project areas where greater surface-water supplies are sometimes necessary to meet groundwater mixing requirements.

24. A number of independent irrigation schemes based on conservation and regulation of flood waters through storage and diversion weirs will be implemented in the Frontier, Baluchistan and Karachi regions. About 150 small dam sites will be investigated. Of these, some 85 will be constructed during the Plan period, which will irrigate approximately 50,000 acres of land now farmed under rainfed conditions.

25. As mentioned earlier, an expanded private tubewell programme will be encouraged, and some 40,000 additional wells, covering a gross area of about 5 million acres, will be installed. This is taken as a minimum target, and may be exceeded by a wide margin.

26. Finally, it is expected that 13 ongoing schemes of bunds and storm water drainage, and 4 new schemes of bunds, storm drains and escape channels will be completed by 1970.

27. The above programme will require concentrated and co-ordinated effort on the part of many agencies and departments involved in it. Financial allocations under the Third Plan for carrying out the programmes in the public and private sectors are shown in Table 5.

WATER DEVELOPMENT—EAST PAKISTAN

Resource Potential and Problems

28. Problems of water development in East Pakistan are typical of those found in countries with monsoon climates: there is either too much water or too little. In the monsoon season (June-September) the great rivers rise above their banks and large quantities of water flow over the countryside; during the relatively long dry season (November-May) these same rivers may not carry enough water to permit even local inland navigation.

29. The extremes in discharge, illustrated in Figure 1, indicate that the flow of the Brahmaputra, Jamuna, Padma, and the Meghna may differ between seasons by a multiple of ten. This variation has led hydrologists to distinguish between, and to treat separately, problems of irrigation and navigation during the winter or "low-flow" months, and of flood control during the summer or "high-flow" months. This is a useful division for surface-water hydrology, and it will be used in the following sections on problems and resources, evaluation of the Second Plan, and objectives and strategy for the Third Plan.

30. There is a large untapped agricultural potential in East Pakistan. Present cropping intensities on some 20 million cultivated acres are substantially below those which climate and water potential would permit, and yields are only one-fourth of those found in many other countries. Capitalizing on this potential, however, necessitates the solution of some of the most difficult hydrological and engineering problems in the world.

Surface Water—The Low-Flow Problem

31. Water is needed between the months of November and May for agricultural and industrial consumption purposes and for maintaining river flows to allow sufficient inland navigation, to avoid damage to fisheries and to prevent

penetration of sea water inland. To some extent these are conflicting demands and optimal division of scarce winter water among them is the crux of the planning task associated with the "low-flow" problem.

32. Studies will be required before definitive answers regarding the quantity of winter water necessary for consumptive uses can be determined. It is apparent, however, that the extent to which the agricultural potential of the Province can be realized depends in great measure on the additional water that can be made available during the winter months. Conditions are ideal during this period for an intensive irrigated agriculture, and large segments of the Province can eventually grow two or even three complete crops per year.

33. To date, calculations of surface water availability have been made largely on the basis of average total quantities with little regard for its time distribution. For agriculture, timing is obviously crucial, since peak crop demands by week or by month may or may not coincide with maximum river flows.

34. Preliminary calculations comparing water use and availability by month indicate that in most years supplemental winter irrigation is possible for about 11 million acres including 4 million acres of boro rice and 7 million acres of other crops such as fruits, vegetables, oilseeds and live-stock fodder. Thus, while the ultimate magnitude of surface water availability is still open to question, supplies are such that a large and vigorous low-lift pump and surface irrigation programme during the Third-Plan period is practicable.

Surface Water—The High Flow Problem

35. While miscalculation of low flow problems may have certain unpleasant consequences, failure to plan for the magnitude and complexity of the "high-flow" problem may be extremely dangerous to life and property. The consequence of flood protection is that the water previously stored on land or flowing over the land to the sea must now be confined to the rivers. The crucial question is whether the rivers have the capacity to carry the additional water without breaching their banks and drastically altering their courses.

36. The Thijsse Report estimates the amounts of water entering the flooded area of East Pakistan at peak flood as follows:

2.2 million cubic feet per second (cusecs) by the Ganges, upstream of Rajshahi,

2.8 million cusecs by the Brahmaputra, immediately downstream of the mouth of the Teesta,

0.3 million cusecs by the Meghna, near Bhairab Bazar, and

0.1 million cusecs over the land between the Meghna and the eastern border of East Pakistan.

Of this 5.4 million cusecs, at least 0.3 will be stored in the flooded areas. The balance, 5.1 million cusecs, has to flow through the rivers or over the flooded land or both.

37. Accurate peak flow measurements are difficult to obtain and precise information does not exist about the way in which the flood waters make their way to the sea. Estimates indicate, however, that if the overland flow were shut off, several rivers would be unable to pass the necessary water during the flood peak and remain in their present beds. For example, it is almost certain that the Padma could not presently absorb the additional load that a large upstream embankment programme would require.

38. Long years will be required for planning and implementing a programme of total solution, besides the cooperation of other riparian states. Meanwhile considerable protection can be given by the construction of levees. This control will mean increased cropping intensities and the possibilities of introducing new varieties and improved agricultural practices heretofore reserved for areas not severely affected by flood waters.

Groundwater

39. In many areas of East Pakistan, supplementary surface water for winter irrigation may not be available. In such cases, increases in cropping intensity will be dependent largely on additional water supplies through groundwater development.

40. Thus far, the approach to groundwater development has been highly pragmatic. Little or nothing is known about potential recharge, soil permeability and other hydrological parameters needed for a full assessment of the aquifer potential. Substantial study and exploration will be required before reliable estimates of groundwater availability can be made.

Water Development under Second-Plan

41. In spite of substantial difficulties, considerable progress was made in the water sub-sector of East Pakistan during the Second Plan period, both in project planning and in actual project implementation. Of major significance for overall planning was the preparation of a Provincial "Master Plan" for water and power development. Although only a preliminary document, the Master Plan outlines a large number of irrigation and flood-control projects which seem to be both technically sound and economically feasible. Additional material and recommendations relevant for project planning have also been prepared by EPWAPDA and under their consultants.

42. A number of major water-development projects have been completed during the Second-Plan period. Chief among these were the Karnafuli Multipurpose Project, the Faridpur Drainage scheme, the Low-Lift and Pump Irrigation Scheme in the Districts of Rajshahi, Pabna and Bogra, and improvement of the Gumti River. Work has also advanced sufficiently on a number of other projects to insure their completion in the Third Plan period. These include the Dacca-Narayanganj-Demra project, the Ganges-Kobadak Project (Kushtia Phase), the Serajganj-

Fulchari Embankment, the Teesta Sub-project and the "300 Tubewell" Project in the Northern Districts.

43. In total, irrigation and drainage facilities provided by the EPWAPDA programme permitted the cultivation of an additional 70,000 acres, and insured improved yields on some 2.3 million acres. (*See* Table 3.)

TABLE 3

ESTIMATED AREAS BENEFITTED BY IRRIGATION DRAINAGE AND FLOOD CONTROL PROJECTS DURING THE SECOND AND THIRD PLANS

Name of the Project	SECOND PLAN		THIRD PLAN	
	New	Old (already cultivated) Area	New	Old (already cultivated) Area
1	2	3	4	5
	............thousand acres............			
Completed Schemes:				
Comprehensive Drainage Scheme for Faridpur	—	375	—	—
Flood Regulation between Surma and Kushiara Rivers	—	130	—	—
Re-excavation of Ghungur, Salda and Buri Naddi	—	46	—	—
Prevention of flood in Feni, Noakhali	—	22	—	—
Improvement of Gazaria Ichamati River, Bogra	—	15	—	—
Sub-Total:	—	588	—	—
Continuing Schemes:				
Ganges Kobadak	20	—	195	50
Teesta Sub-Project	—	—	33	—
Ground Water Development	—	—	187	—
Small Irrigation Schemes	50	50	50	100
Small Irrigation Schemes (Deptt. of Agriculture)	—	200	—	400
Coastal Embankments	—	1,200	33	1,000
Improvement of Old Dakatia and Little Feni Rivers, Noakhali	—	50	—	74
Comprehensive Drainage Scheme for Sadar Sub-Divisions, Noakhali	—	100	—	82
Power Pump Irrigation (ADC)	150	—	750	—
Dredging and Strengthening of Gumti River	—	60	—	60
Sub-Total:	220	1,660	1,248	1,766

TABLE 3—*contd.*

New Schemes:				
Resuscitation of River Ichamati, Pabna	—	—	—	50
Dacca—Narayanganj Demra	—	—	15	12
Tippera-Chittagong Multipurpose	—	—	50	25
Haor Area	—	—	50	100
Southern Rajshahi	—	—	20	10
Manu River	—	—	25	56
Small Pump Irrigation on Adjacent to Transmission Lines	—	—	50	—
Rangpur Irrigation	—	—	40	—
North Mymensingh Tubewell	—	—	10	—
Tetulia Pochagar	—	—	10	—
Brahamputra Flood Embankment (Phulchari to Sirajganj)	—	—	—	594
Sangu Multipurpose	—	—	—	30
Mathamuhuri Project	—	—	—	10
Gumti Flood Control and Irrigation Project	—	—	—	50
Comilla Tubewells	—	—	—	20
Private Sector Power Pumps	—	—	240	—
Sub-Total:	—	—	510	957
Total:	220	2,248	1,758	2,723

44. Of equal importance for water development in the East Wing has been the low-lift pump project of the East Pakistan Agricultural Development Corporation (EPADC) outlined in the Agricultural Chapter. This programme provided water for the cultivation of an additional 15,000 acres, largely in the winter season, during the Second Plan period.

45. The Coastal Embankment Project, located along the Bay of Bengal and designed to increase agricultural production by protecting lands from sea-water incursion, deserves special comment. About 1,200 miles of embankments will have been constructed by the end of the Second Plan. These structures already protect an estimated 1.2 million acres.

46. A related water programme was implemented through the Rural Works Programme during the last three years of the Second Plan. In 1963-64 for example over 6,000 miles of drains were renovated. These improvements had the effect of reducing the acres lost by flooding and they also improved yields in certain areas.

47. In addition to irrigation, drainage and flood-protection projects, several other water programmes were of prime importance. Twentyone dredgers were engaged in the excavation of over 40 million cubic yards of earth, and the establish-

ment of a machinery pool helped improve the efficiency of water-programme implementation.

48. Thus the general progress of East Pakistan water development during the Second Plan has been substantial. Efforts now under way to improve the information base will increase effectiveness of water development agencies during the Third Plan period.

Objectives and Strategy for the Third Plan Water Programme

49. The strategy for the East Pakistan water programme during the Third Plan is dictated by several factors. One of the most important is the necessity for accelerating the Provincial growth rate, particularly in agriculture. Such an acceleration is imperative if per capita income is to increase, unemployment is to decline, and additional resources are to be generated for future development.

50. The strategy is also dictated by the present limited knowledge about the hydrology of East Pakistan, the extremely difficult nature of many of the flood-control projects, and the limited number of projects fully engineered that are currently available. In addition, there is the dilemma of having many projects with long gestation periods, while at the same time requiring projects that can produce economic growth in the short run.

51. No strategy can completely solve the problems indicated above. The course chosen, which is similar to that of West Pakistan, is to proceed as rapidly as possible with the engineering necessary for the regional and project planning of large flood-control programmes (and of course to begin several of the more advanced projects), and to rely for Third Plan growth on several selected schemes with short-gestation periods, typified by the low-lift pump and tubewell schemes. In this manner, it is hoped to meet the longer-run objectives, and also to add by 1970 about 1.7 million acres to cropped area, and to improve yields on an additional 2.7 million acres.

THIRD PLAN PROGRAMME

Investigation, Surveys and Research

52. The difficulties of water development planning without adequate information were felt and appreciated during the Second Plan period. Hence, all research, investigation and survey efforts will be accelerated under the Third Five Year Plan. In planning studies, increased attention will be given to assessing the regional effects of various projects proposed in the Provincial Master Plan. Through intensified hydrological investigations, efforts will be made to provide better data on river discharges, particularly during the high-flow period. For this purpose several types of advanced sounding and measuring devices have been ordered. More reli-

able data will also be obtained on the transport of solids by rivers. In addition to step up surface-water hydrological investigations, EPWAPDA will attempt to supply an accurate picture of the groundwater potential of East Pakistan. Extensive explorations to determine the magnitude of basic groundwater parameters are already being carried out in the Northern Districts and these investigations will be extended to the remainder of the province on a selective basis.

Irrigation, Flood-Protection, and Drainage

53. A number of multipurpose projects are being carried over from the Second Plan. Chief among these are the Ganges-Kobadak Project (Kushtia phase), the Teesta Project, the Tippera Chittagong (Phase I) Project, and the Southern Rajshahi Irrigation Project. Under the Third Plan, the following important multi-purpose projects will also be undertaken: Muhr River Project, Ganges-Kobadak (Jessore Phases II, III), the Dacca Southwest Project, the Karnafuli Irrigation Project and the Faridpur Project.

54. Several irrigation schemes will be continued from the Second Plan period also. These include the Groundwater Development and Pump Irrigation programme in the Northern Districts, the small Pump Irrigation Schemes and the Rangpur Irrigation Project. Some of these projects are well advanced, such as the Groundwater Development Project at Dinajpur, and can be expected to be in operation very early in the Third Plan period. Additional irrigation schemes will be initiated under the Third Plan. These include the North Mymensingh Tubewell Project, the Tentuali Pochaghar Tubewell Project and the Hakaluki and Bara Haor Projects.

55. The fight against floods will continue from the Second Plan period in the form of the Coastal Embankments project, the comprehensive Drainage Scheme for Sadar Subdivision, Noakhali and the Brahmaputra Flood Embankment programme. In addition, projects to be initiated during the Third Plan period include the Brahmaputra Left Bank Embankment and the Noakhali Reclamation Project.

56. From the view point of rapid returns, an even more important programme for Provincial water development during the Third Plan period is the Low-Lift Pump Scheme to be administered by the East Pakistan Agricultural Development Corporation. This project, outlined in the Agricultural Chapter, provides for the placing of approximately 12,000 low-lift pumps along rivers and streams throughout East Pakistan. Water thus obtained will permit the cultivation of approximately 750,000 additional acres, principally in the winter season. This programme, which will enlist the full support, co-operation and assistance of the Basic Democracies and Union Councils, will be one of the major sources of agricultural and economic growth during the Third Plan period. Additional development within the water sector may be expected from drainage and flood-control projects being carried out under the Rural Works programme, from the Comilla District Programme and from

irrigation schemes using pumps installed by private individuals. These programmes are also outlined elsewhere in the Plan document.

57. Benefits expected from water development programmes are impressive. It is anticipated that irrigation facilities provided by EPWAPDA, EPADC and the private sector will permit the addition of approximately 1.7 million acres to cropped area. Drainage and flood control schemes, to be executed principally by EPWAPDA will provide improved yields on another 2.7 million acres. Implementation of these programmes will have profound effects on agricultural production and employment in East Pakistan, and will aid substantially in accelerating the provincial growth rate during the Third Plan period.

POWER DEVELOPMENT

58. The growth of the economy and the rising standards of living are reflected in a rapid rise of the demand for energy, especially in the form of electric power. The increase of generating capacity and distribution facilities stimulates new and expanded economic activity in many fields and improves levels of efficiency. Thus, there is a close inter-relation between the pattern of economic growth and the development of power facilities.

59. The problems and potentials in the two Provinces of Pakistan are sufficiently different to treat these areas separately. In East Pakistan, the high density of population both in rural and urban areas creates specific problems with regard to location of plants and the type of transmission and distribution system; in addition, the existence of numerous rivers with large seasonal variations of water discharge and shifting beds creates a problem for establishing a reliable transmission system. As there are only minor differences in elevation of the land, the scope for installation of hydro-electric capacity is only small and by now already used to a large extent. Recent discoveries of natural gas and coal in useable quantities may profoundly change the power prospects in East Pakistan.

60. In West Pakistan many parts of the Province are only sparsely populated, and there are major differences in the possible sources of power generation. Vast quantities of natural gas are being put to use, whereas the mountainous areas in the North provide a large and hitherto almost untapped source of hydro-power. On the demand side, special attention is required for the large requirements of the private and public sector tubewell development, which is closely linked to the programmes for controlling groundwater levels and soil desalinization.

POWER DEVELOPMENT—WEST PAKISTAN

Resources and Problems

61. West Pakistan is fortunate in having large amounts of undeveloped hydro-electric power potential in the northern foothills and mountains and large

reserves of natural gas in the southern plains which are suitable for economical thermal power generation. In addition nuclear power generation is becoming a competitive source of energy and must always be considered in planning additions to the power system. At present the northern area of the Province is served primarily by the West Pakistan Water and Power Development Authority (WPWAPDA) from both thermal and hydro sources through an integrated grid network. The southern portion of the Province, except for Karachi, is also served by WPWAPDA from thermal generation although the integrated grid network for this region is not yet built. Karachi is supplied independently by the Karachi Electric Supply Corporation (KESC) in which the Government has a controlling interest. WAPDA supplies about 75 per cent of the electricity consumed in West Pakistan, KESC provides about 18 per cent, and the remainder is supplied by independent private companies in Rawalpindi and Multan and by isolated stations of WAPDA such as the Quetta region. Most of the generating plants are relatively new and in good condition. The high voltage transmission lines are likewise relatively new and adequate for the present loads. The secondary distribution system of higher voltages is reasonably adequate and well equipped but the primary distribution system in many areas is old and inadequate for present loads. This primary distribution system will require special attention to improve the quality of service in the coming years.

62. A rapidly expanding economy such as that of West Pakistan requires ever-increasing amounts of electric power to meet the needs of industrial and private consumers. In addition the programme for reclamation of saline and waterlogged land will be a substantial factor in increasing the requirements in the Province for power for tubewell pumping. While the power requirements have been reasonably met during the Second Plan the margin of safety has been very small. The Northern Zone Grid of WAPDA has a backlog of some 80,000 customers awaiting connection. Shortages in generation capacity exist periodically in all regions. Extraordinary efforts will be required to co-ordinate the programmes for generation, transmission and distribution facilities to ensure an adequate and timely supply of power to support the growth of all sectors of the economy.

63. The major problem of supply is the long lead time involved in the investigation, design, financing and construction of the power facilities which must all be co-ordinated to match an estimated future load. By the end of the Third Five Year Plan period the load on the main WAPDA grid in the Northern Zone is expected to be more than double what it was in the beginning of the period, increasing about 100 megawatts (MW) each year. Comparable growth in the KESC region and in the presently isolated regions of the WAPDA Southern Zone can be expected. Even with the presently scheduled additions of thermal generation to the Northern Grid Zone of WAPDA, the firm generating capacity will be inadequate to meet the estimated loads for substantial portions of the time until

1968 when the major units at Mangla can be expected to be available. In the Southern Zone shortages also exist at present, although the gas fields at Mari and Sui present opportunities for thermal generation installations. Extension of transmission facilities to match the new generation planned and the estimated loads must be phased for timely completion. Distribution facilities must be rehabilitated where necessary and extended to meet the needs of the consumers.

Progress under Second Plan

64. During the last five years, substantial progress was made in the field of electricity generation and distribution. Generation capacity in West Pakistan increased from 700 MW in 1960 to an estimated 1,135 MW in 1965. Energy use increased considerably faster, from a gross consumption of 1,622 million kwh in 1960 to an estimated 3,600 million kwh in 1965. In spite of system additions, load curtailment in the Northern Zone became necessary in January 1965 because of lack of generating capacity and even with scheduled installations now under construction some load curtailment will continue to be necessary at times of system peak until 1968. The WAPDA Southern Zone, particularly in and around Hyderabad, is also short of capacity as is Karachi. At the present time, the 132 KV grid generally has sufficient capacity to supply existing loads. At several primary and secondary grid load centres, however, demand will soon reach the capacity of both lines and substations and in particular, substation transformers. The condition of the distribution system is still not satisfactory although renovation programmes were undertaken in nine cities and are now about to be completed. This programme must be continued and accelerated and at the same time the associated generation and transmission facilities must be kept abreast of the demand.

65. Manufacture of line materials and other hardware was started during the Second Plan, including the production of concrete poles, but the capacity of these units is small and must be expanded to cope with the accelerated programme. Training programmes were started and mechanization and better tooling of technical personnel was taken up.

Objectives and Programmes for the Third Plan

66. The main target of the Third Plan continues to be the provision of a sufficient and dependable supply of comparatively low-priced electric power. The programme must make up the present shortages, provide for meeting anticipated demands and improve reliability of service. Installed generating capacity will be more than doubled by extension of the existing plants and construction of new ones. Transmission lines will be built or extended as required to serve the new generating capacity and the rapidly growing loads. Emphasis will be placed on the rehabilitation and improvement of the distribution system. Within these objectives special attention will be given to rural electrification, closely linked with the electrification of tubewells and to the introduction of electric traction by the railways.

67. The programme involves increasing the pace of construction of generation, transmission and distribution facilities over that of the Second Plan to match the accelerating demands for power arising from the expanding economy and from the reclamation programme. Extraordinary effort will be required in the distribution field to connect the large backlog of new customers and to bring the existing distribution system up to a reasonable standard. Renovation programmes in urban centres will be accelerated and renewed emphasis will be given to training programmes. Improved methods of repair and maintenance will be introduced to improve the distribution system operations and reduce costs.

68. The expansion of the generating capacity is directly related to the expected growth of demand, which in turn depends to a large extent on the structure of investment and consumption projected for the coming years. Generally, in a developing economy the use of electricity for productive and consumption purpose together doubles every five to seven years. In West Pakistan even higher rates of growth are foreseen, as a sizeable part of additional demand arises from tubewell pumping associated with the reclamation programme beyond the more normal expansion of industrial and consumer use. For the grid systems in the Northern area and in Sind estimates of power demand presented in the WAPDA Master Plan indicate a requirement of generating capacity in 1970 of about 110 per cent above the 1965 level. This estimate is based on extensive market surveys and largely endorsed by the World Bank Mission which studied the economics of Tarbela dam. In the Karachi region an even higher rate of growth is expected for the coming years, arising from the present shortages of power and the tremendous growth of both industrial and consumers demand.

69. The bulk of the additional generation capacity will be available from the Mangla hydro station, constructed under the aegis of the Indus Basin Development Fund. By 1968 a total capacity of 300 MW is expected to become available from this source. A further 100 MW will be obtained from this source by 1970. On the Northern Zone grid it is expected that part of the deficit of generating capacity before 1968 will be removed through the completion of the ongoing project at Lyallpur (130 MW) and gas turbine generators at Lahore. In the Southern Zone even with the completion of Hyderabad Station and the extension of the Sukkur plant, together adding 48 MW to the existing capacity, generation will not be sufficient to cope with the additional demand in the region. A further addition to the thermal capacity is envisaged by constructing a new 200 MW plant at a suitable location to help zonal as well as regional development. In the Karachi area the extension of the "C" station by 66 MW is envisaged in addition to the construction of a 132 MW nuclear station. In the isolated Quetta region an extension of existing facilities by 7.5 MW is expected to be completed during the Third Plan.

70. The total mileage of lines of 11 KV and above will increase from 14,000 at the end of the Second to 25,000 at the end of the Third Plan. The existing grid systems in the Northern and Southern zones will be further strengthened and augmented. The major addition to the primary grid system will be in the Northern zone between Mangla, Lahore and Gujranwala. In the Southern zone the main addition to the primary grid will be the integration of the Hyderabad and Sukkur networks and connection to the new plant and possibly interconnection of this network with Karachi to the south and through Rahim Yar Khan to the North.

71. During the First Plan, a beginning was made with rural electrification when nearly 600 villages, particularly in the Frontier region, were connected. During the Second Plan, the achievement was only 50 per cent of the target, but substantial progress was made as a corollary to the provision of networks for tubewell irrigation. By June, 1965 the total number of electrified villages is expected to be around 2,500 out of the nearly 9,000 villages with a population over 1,000. The Third Plan now provides for connecting an additional 4,000 villages throughout West Pakistan.

POWER DEVELOPMENT—EAST PAKISTAN

Resources and Problems

72. The main river system of East Pakistan divides the Province into an Eastern and a Western part. The electricity supply system consists of two similar separated networks, each of which connect a series of generating plants by transmission lines with each other and with the consumer. Generating capacity has, contrary to the experience in many other developing regions, kept pace with demand; in fact, part of the recently added generating capacity was not fully utilized because of delays in the creation of a sufficiently wide and efficient distribution system. Thus, there was large unsatisfied demand for electric power notwithstanding a sufficient level of generating capacity.

73. The flat deltaic region of East Pakistan offers little scope for the generation of hydroelectric power. Some small sites for dam construction could be found, but of doubtful economic value. Except the capacity at Karnafuli in the Chittagong Hill Tracts, all electric power generated in East Pakistan is thermal. This causes a need for diversification, especially so where up till present, the sources of generation are largely imported. This may radically change in the coming years, when domestic coal, oil and gas can probably be developed and the first nuclear unit will be added to the generation capacity.

Progress during the Second Plan

74. Notwithstanding an increase of generating capacity by almost one and one-third over the Second Plan period (from 182 MW in 1960 to an estimated

300 MW in 1965), the level of capacity is still extremely low. Generation increased more rapidly, from 441 million kwh in 1960 to an estimated 830 million kwh in 1965. Great progress was made in the completion of the grid system in the two grid regions of the province. The total mileage of transmission and distribution lines increased more than fourfold, bringing the total mileage up to 1,500 in 1965. Still, the distribution system is not satisfactory, as can be seen from the fact that in rural electrification the target was far from being met. This is the more indicative, where 95 per cent of the population of the province is living outside towns and cities.

75. The obvious difficulty in the way of further electrification of the Province, specially at the village level, is the level of income and consumption in those areas. The problems could be brought closer to a solution by the organization of co-operatives and the adoption of special tariffs and other terms for the supply of electricity during off peak hours. This large expansion of generating capacity is justified, and does not conflict with the priority which must be attached to the programme of distribution. For, in the Third Plan, a major effort will be made to develop the industrial base for East Pakistan, and many of the projects in hand or under preparation are of the energy intensive type. This will cause a very rapid growth of industrial power use. At the same time, the efforts to accelerate the rural electrification programme, largely based on the experience of the Comilla pilot project, will require a sizeable expansion of the generating capacity of the province. Experience in East Pakistan demonstrates that distribution of power, together with small village roads, is the main instrument for rural development. In some areas where electric power was recently introduced, this resulted in a significant change in the structure and the level of activity of small industries. Also additional tubewells call for rapid extension of distribution lines to areas underlain by sweet water. Together, these factors constitute the basis for the forecasted requirements of installed capacity for electricity generation in the Province. Valuable experience is being gained in this connection through the Comilla Kotwali Thana project for rural electrification.

Objectives and Programmes for the Third Plan

76. The Plan will involve a substantial increase of generating capacity in East Pakistan, mainly of the thermal type, but to some extent diversified by adding one unit to the Karnafuli hydroelectric plant and by the construction of a nuclear power plant at Rooppur. In total, it is expected that during the Third Plan, generating capacity will increase from the present 300 MW to about 830 MW. The largest part of this additional capacity will be closely linked to the demand in the rapidly growing centres of Dacca and Chittagong. A 60 MW thermal generating station will be built at Chittagong, whereas the 120 MW Tongi station will mainly serve the Dacca region. Also the Third unit at Karnafuli [40 MW], the extension of the Siddirganj plant by 50 MW and the completion of the 120 MW

station at Ashuganj will add supplies to the same area. On the Western grid a 60 MW plant at Khulna and another 60 MW station at Rangpur-Saidpur will be built during the Third Plan.

77. The two grid systems will be unified through the inter-connection of the Eastern and Western network across the Brahmaputra by 1968. Around the two centres, Dacca and Chittagong, 132 KV rings will be strung in order to provide reliable supplies to these cities and to the industries around them. Another 132 KV transmission line will connect Tongi-Tangail-Mymensingh and Sylhet-Mymensingh in the East and a 132 KV line will be extended from Ishurdi to Nilphamari via Bogra and Rangpur West of the Brahmaputra. An extensive network of lower voltage lines will be linked to these main transmission lines, stretching over a total distance of about 3,600 miles.

78. Many agencies of the East Pakistan Government are concerned with the development of the rural areas. EPWAPDA is engaged in many projects providing flood protection, drainage and irrigation of agricultural lands, or the installation of tubewells. The electric supply facilities for these projects may provide frameworks for the development of rural electrification. Similar possibilities exist with regard to the low lift pumping programmes of EPADC, the agricultural extension services and experimental stations of the Agriculture Department, projects for the processing of agricultural products of the Small Industries Corporation, and the Rural Works Programme which undertakes special products for furnishing useful outlets for rural electricity supply. In this respect the pilot project Comilla Kotwali Thana can serve as a guide for further projects in the field of rural electrification, establishing specific patterns of development and utilization for future programmes. For the Third Plan, it is expected that the benefits of electric supply can be brought to about 2,500 villages.

POWER DEVELOPMENT—SUMMARY

79. The preceding paragraphs have sketched out a programme of increasing power production and distribution, and improved efficiency, training and maintenance. The targets set for the Third Plan should be considered subject to a certain margin of adjustment. They do, however, provide a realistic basis on which short term decision can be based. They tie in with the overall targets of development over the next five years and over the Perspective Plan period. The Plan proposes doubling of the installed generating capacity over the Plan, with a more than proportional increase in East Pakistan. Table 4 summarizes the different sources of generation which are included in the programme.

TABLE 4

INSTALLED CAPACITY BY SOURCES OF GENERATION
(1960-1970)

(*In MW*)

	1960	1965	1970	Percentage increase over the Second Plan
Public Utilities				
Hydro	241	348	788	127.0
Steam	29	686	1,597	134.0
Diesel	90	111	71	—35.0
Nuclear	—	—	202	—
Sub-Total:	628	1,145	2,658	137.0
Industrial Establishments:	254	290	230	—21.0
Total:	882	1,435	2,888	105.0

THIRD PLAN PROGRAMME—CENTRAL GOVERNMENT

80. The programme to be executed by the Centre covers mainly the activities of the Pakistan Atomic Energy Commission, the Ministry of Kashmir Affairs and the provisions for the Department of Meteorology and the Survey of Pakistan.

Atomic Energy Commission

81. To develop the application of radioactive isotopes and fissioned production in research, agriculture, medicine and industry, the Pakistan Atomic Energy Commission during the Second Plan period trained some 350 nuclear scientists and engineers and established 8 medical and agricultural centres. It had under implementation, at Islamabad in West Pakistan, an Institute of Nuclear Research and Reactor Technology with a swimming pool research reactor and, at Dacca in East Pakistan, a more modest centre with a nuclear accelerator of 10-15 Me.

82. During the Third Plan, the Institute at Islamabad will be completed and will become the country's leading centre for advanced study and research covering physics, chemistry, biology, medicine, engineering and metallurgy. The research facilities at Dacca will be further expanded and strengthened.

83. The Commission will set up three additional agricultural centres—one in the Agricultural University of Lyallpur in West Pakistan and two in East Pakistan. As stated under the Electric Power Programme, it will further install a nuclear power station of 70 MW at Rooppur in East Pakistan and one of 132 MW at Karachi.

Meteorological Services

84. The Department of Meteorology will complete the later phases of their schemes undertaken during the Second Plan. The new programme includes provision for the improvement of Meteorological Telecommunication, Weather Forecasting and Weather Warning Services and several other important but smaller items.

Survey of Pakistan

85. The demands on Survey of Pakistan for the preparation of general and special maps is increasing with the increased pace of development. It will, therefore, be expanded through new schemes aimed at the purchasing of equipment and machinery. Some 11 schemes including the Geodetic Survey Scheme, the Astronomical Observatory and the Length Standardization Laboratory, will be completed in the Third Plan.

Ministry of Kashmir Affairs

86. The proposed programme for the Azad Kashmir and Northern areas covers a large number of schemes, all but 4 of which are new. Of a total of 41 items proposed for the Third Plan, 12 are small hydel projects, 19 cover surface diversion works, one is a tubewell scheme and 9 are power distribution schemes. All of these will be completed during the Third Plan.

87. Some culturable lands in the area have no source of flow water. In such cases, the possibility of irrigation by tubewells is visualized. Investigations are now in progress, and if the results of experimentation warrant it, about 50 tubewells will be provided during the Plan period which would irrigate about 20,000 acres

TOTAL PLAN INVESTMENT

88. The Third Plan provides for an investment in water and power of Rs. 9,050 million—Rs. 8,400 million in the public sector and Rs. 650 million in the private sector. These vast sums, which in total represent over 17 per cent of the entire Plan allocation, will make a profound contribution to the increased productive capacity of the country.

TABLE 5

PROGRAMME OF NET EXPENDITURE ON WATER AND POWER DEVELOPMENT, 1965-70

(Million rupees)

Sub-sector	East Pakistan			West Pakistan			TOTAL		
	Ongoing	New	Total	Ongoing	New	Total	Ongoing	New	Total
				PUBLIC SECTOR					
Irrigation and Surveys	111.47	30.00	141.47	179.03	7.50	186.53	290.50	37.50	328.00
Multipurpose Development	783.86	375.56	1159.42	189.50	120.00	309.36	973.36	495.56	1468.92
Irrigation	189.75	200.18	389.93	232.50	162.80	395.30	422.25	362.98	785.23
Drainage, Reclamation and Tubewells	—	—	—	651.05	910.00	1561.05	651.05	910.00	1561.05
Flood Regulation	336.50	50.00	386.50	11.20	62.50	73.70	347.70	112.50	460.20
Open Canals	—	—	—	46.12	65.00	111.12	46.12	65.00	111.12
Miscellaneous	174.68	16.00	190.68	25.00	—	25.00	199.68	16.00	215.68
Power	461.08	970.92	1432.00	449.90	1256.00	1687.80	910.88	2208.92	3139.80
Sub-Total:	2057.34	1642.66	3700.00	1784.20	2565.80	4350.00	3841.54	4208.46	8050.00
Centre's Programme	—	90.00	90.00	—	260.00	260.00	—	350.00	350.00
Total: (Public Sector)	2057.34	1732.66	3790.00	1784.20	2825.80	4610.00	3841.54	4558.46	8400.00
				PRIVATE SECTOR					
Irrigation, Drainage, etc.	—	70.00	70.00	—	300.00	300.00	—	370.00	370.00
Power	—	30.00	30.00	—	250.00	250.00	—	280.00	280.00
Total: (Private Sector)	—	100.00	100.00	—	550.00	550.00	—	650.00	650.00
Grand Total:	2057.34	1832.66	3890.00	1784.20	3505.80	5290.00	3841.54	5208.46	9050.00

CHAPTER XVIII

TRANSPORT AND COMMUNICATIONS

INTRODUCTION

An effective transport and communications system is a necessary condition for rapid economic growth. It serves to link all the other sectors of the economy together, and has a profound influence on the achievements in almost every sphere of national life. In the context of national development, transport and communication facilities play a fundamental role in expanding the domestic markets and making possible an increased level of economic and social activities. Inadequate transport is frequently a major cause of non-realisation of targets in the agricultural, industrial and other sectors.

2. The development effort in Pakistan has suffered from lack of adequate transport because the transport system the country inherited at Independence was not only not geared to serve the development needs of the new country, but needed considerable reorientation, rehabilitation and modernization. It was recognised that very large investments would be required to clear the heavy arrears of maintenance and replacement in all fields of transport and to create additional capacity to meet the growing needs of the economy. But the task involved was so enormous, and available resources so inadequate, that it could be conceived only as a long-term programme extending over several, plan periods. Efforts hitherto have had to be concentrated mainly on the rehabilitation and modernization of the existing facilities; and the geographical expansion of facilities has been very modest.

3. The process of development, however, has now reached a stage where a large-scale expansion of transport facilities has become necessary besides the consolidation of the existing assets. The growing requirements of the economy are placing an increasingly severe burden on the transport capacity and the inadequacy of transport is believed to be seriously hampering the productivity and growth of the national economy. Moreover, the structural changes taking place in the economy are exerting a powerful influence on the pattern of traffic in different parts of the country. While railways and inland water transport continue to bear the main burden in the movement of mineral and agricultural products involving bulk transportation, road transport, especially in West Pakistan, has been assuming an increasingly important role in the movement of short-haul traffic, in particular manufactured goods and perishables. This trend will be further intensified with the expansion of the road net-work in the two Provinces. Civil aviation is emerging as an effective means of handling high-speed traffic between the two Provinces and between important commercial and administrative centres within each Province. The shipping industry is also growing rapidly and will require large investments in order to secure a reasonable share of the overseas trade.

Progress under Second Plan

4. During the Second Plan period (1960-65) domestic production and overseas trade increased considerably, generating heavy demand for transport. The traffic handled by various modes of transport during the first four years of the Second Plan has increased at annual mean rates as shown below:

	1959-60	1963-64	Annual mean rate of increase
Railway passenger miles (million) ...	7,407	8,247	2.8 per cent
Railway freight ton miles (million)...	4,868	5,856	6.25 per cent
Inland water transport—mechanized sector (million ton-miles) ...	217	336	13.75 per cent
Karachi, Chittagong and Chalna Ports (million tons)	8.01	11.38	10.5 per cent
Air passengers	240,000	712,000	50 per cent

Information about road transport is not precise but considering that the commercial fleet has increased by 70 per cent it is assumed that substantial expansion has occurred in this field also.

5. Most of the physical targets of the Transport and Communications Sector of the Second Plan have been achieved. Although capacities have been substantially increased since 1955, many transport bottlenecks continue to be encountered. The railways still find themselves unable to carry all the freight offered, especially during peak seasons, and their wagon turn-round remains comparatively poor due to worn out track stretches, weak bridge structures, inadequate yard and terminal facilities, and an out-dated signalling system. Passenger trains are generally overcrowded. Serious congestions occur at the ports and turn-round of ships is adversely affected when large imports of bulk commodities like foodgrains, cement and fertilizers coincide with the peak periods of domestic traffic. During certain seasons, the unsatisfactory condition of roads and inadequate draft in riverine channels renders several outlying areas inaccessible. Many rural areas continue to suffer from social and economic isolation.

6. While the Railways, the Pakistan International Airlines and the mechanised sector of inland water transport maintain and publish comprehensive statistical data about the availability of assets and the volume of traffic on various sections, no reliable information is available about the activities of road transport (private sector) and the large non-mechanised inland water transport fleet. In the absence of such statistics, a clear picture of the adequacy or otherwise of the transport system cannot be obtained. Arrangements for securing and publishing statistics needed for planning purposes will have to be made on a systematic basis.

The Third Plan—objectives and strategy

7. Since the level of transport activity and economic growth are closely interrelated, the transport requirements for any period are determined by the extent of development envisaged in the other sectors of the economy. The objectives and goals of the Third Five-Year Plan are expected to generate a sharply increasing demand for transport services in the coming years. The aggregate size of the Plan is more than double that of the preceding Plan and the targets are much higher; production in the agricultural, industrial and mining sectors is expected to increase by about 58 per cent, from 54.7 million tons to 86.7 million tons; the national income is expected to rise by 37 per cent, and the population by 14 per cent. Considering all these factors, as also the fact that traffic during the past decade has been rising much faster than the growth rate of Gross National Product (GNP), the total increase in transport demand over the Third Plan period is estimated at about 60 to 70 per cent.

8. To ensure that the contemplated economic growth is not retarded by lack of transport capacity, the transport system would have to be suitably expanded and modernised. The available resources would have to be so allocated for development of various modes of transport as to provide a maximum expansion of the overall capacity. Certain inter-modal studies which have been initiated by the two Provincial Governments would suggest the guideline for the promotion of an adequate, economical and efficient transport system wherein each form of transport will play the role for which it is best suited. The most essential requirement would be to ensure that the development of the transport system is conceived as an integrated whole and is related to the process of economic development. In this context it would be necessary to formulate a comprehensive national transport policy and to devise adequate machinery to enforce it. The setting up of a high-level National Transport Policy Commission is under consideration of the Government. Meanwhile, programmes for expansion of transport capacities have been framed on the basis of accepted general principles which take into account the suitability of different forms of transport for handling the various types of traffic effectively and economically. For instance, railways and inland water transport will continue to meet the requirements of bulk transportation, road transport handling increasing volumes of small units of traffic involving comparatively shorter hauls, and civil air-transport playing an increasingly important role in handling high speed traffic.

9. Specifically, the objective of raising the transport capacity during the Third Plan period is proposed to be achieved largely by improving the efficiency of the existing system through modernisation of plant and equipment; adoption of improved techniques and practices in the fields of construction, maintenance and operation; expansion of storage and handling facilities at the ports and other

distribution points and expansion of training and research facilities. New facilities will be created for meeting specific transport requirements to the extent resources will permit. Manufacturing capacity will be developed to increase availability of transport equipment and spare parts with increasing use of indigenous raw and other materials, so as to accelerate the pace of rehabilitation and development and to supplement the availability of resources and equipment from foreign sources.

10. To ensure optimum utilisation of the available transport capacity, the need for effective co-ordination between the different transport agencies will have to be given utmost emphasis. A special problem in this context, which seriously affects the working of the ports and the inland transport system, arises from the large-scale import of bulk commodities, especially foodgrains, during the normal traffic peaks. Special measures to be taken to solve this problem would be (*i*) to rationalise the programme of foodgrain imports and (*ii*) to develop the capacity of the inland transport system so as to absorb any abnormal pressures of bulk imports. The solution of this problem assumes special urgency considering that the existing port and inland transport capacities have almost reached a saturation point while the new facilities including those for grain storage designed to increase the existing capacities will be available largely towards the end of the Third Plan period.

Third Plan Programme

11. An allocation of Rs. 10,450.5 million is proposed for the development of transport and communication services during the Third Plan period—Rs. 6,550.5 million in the Public Sector and Rs. 3,900 million in the Private Sector. The financial outlay and physical targets are given in Annexures 'A' through 'E' pp. 360-364.

The content of the programmes and guidelines for future development in the various fields are described in the following paragraphs:

RAILWAYS

12. The overall performance of the Railways during the Second Plan period has been satisfactory in the achievement of both the financial and physical targets. Important steps were taken in the adoption of modern techniques of operation and practices. CTC, relay interlocking and tokenless block working were introduced on several sections, track and bridges were strengthened to improve loads and speeds of trains, welding of rail joints was initiated, and diesel operation was extended to cover many more services (in 1963-64, diesel operation accounted for 66.6 per cent of gross ton-miles on P.W.R. and 61.4 per cent on P.E.R.). All these measures helped to improve the operating efficiency of the Railways.

13. During the Third Plan period, the Railways are likely to be called upon to carry much larger volumes of traffic, originating particularly in the agricultural and mining sectors, and of capital goods, although their share in the movement of total traffic volume will gradually diminish with the increasing growth of other

modes of transport. To meet new requirements and to hold on to existing traffic, railways would have to concentrate on the modernization of their equipment, adoption of modern techniques and the improvement of their operating efficiency. In this context, additional capacity would be developed through electric traction, expansion of dieselization, improvement of track, provision of additional tracks on heavily congested sections, installation of modern signalling and remodelling of yards and terminal facilities. Particular attention would have to be given to the improvement of freight carrying capacity by raising the standard of freight stock so that it can run at speeds obtainable in other advanced countries.

14. Although the traffic pattern has been changing in favour of the other modes of transport, it is anticipated that the Railways will carry about 40 to 50 per cent of the additional traffic generated during the Third Plan, which will represent an increase of about 30 to 35 per cent in their freight traffic. Passenger traffic on both the railways is expected to rise by about 15 per cent.

PAKISTAN WESTERN RAILWAY

Assessment of traffic

15. (*a*) *Goods Traffic* is expected to reach a figure of 5,000 million ton-miles by the end of the Second Plan, representing an increase of about 31 per cent over the Plan period.

Taking into account the past trends, the future industrial and agricultural development in the country and allowing for some diversion of short lead traffic to road transport, it is anticipated that the increase during the Third Plan period will be about 30 to 35 per cent.

(*b*) *Passenger Traffic* is expected to reach a figure of 6,400 million passenger-miles representing an increase of 15 per cent during the Second Plan.

Taking into consideration the past trend in passenger traffic, the increased economic activity, the rapid pace of urbanization and increase in population, and some diversion to road transport, it is anticipated that the increase in passenger-miles during the Third Plan period will be about 15 per cent.

Progress under Second Plan

16. For the rehabilitation, modernization and expansion of facilities on the Pakistan Western Railway an allocation of Rs. 972.3 million was made in the Second Plan—Rs. 283.9 million for the completion of ongoing projects and Rs. 688.4 million for new works. The programme was subsequently enlarged to provide for additional rolling stock and certain essential track renewals.

17. In financial terms an expenditure of Rs. 1,140 million is expected to be incurred by the end of the Plan period. In physical terms, most of the targets will have been achieved as indicated below.

Rolling Stock

18. Arrangements have been completed for the procurement of the entire rolling stock provided for in the Plan *viz.*, 155 locomotives, 8,642 wagons, 536 passenger carriages and 119 other coaching vehicles. Of these, 150 locomotives, 8312 wagons, 295 passenger carriages, and 110 OCV's are likely to be received by the end of the Second Plan period; the remaining stock will be delivered early in the Third Plan period.

Track Renewal

19. Against the target of 1,054 track miles of rail and 1,779 track miles of sleeper renewals, the actual accomplishment is expected to be 914 and 1,442 track miles, respectively. To maintain the pace of track renewal, arrangements have been made for the procurement of material for an additional 100 track miles.

Construction of new Lines

20. The work on Phase I of the Karachi Circular Railway project (Drigh Road to Khadda—17.28 miles) has been substantially completed and the line opened to goods and passenger traffic. The conversion of the Hyderabad-Mirpurkhas Section from Metre to Broad gauge, and construction of Kot Adu-Dera Ghazi Khan Railway is progressing satisfactorily. Preliminaries to start the work on introduction of electric traction on Khanewal-Lahore section are in hand.

Other major Projects

21. The Ayub bridge over river Indus has been opened to traffic. Preliminary arrangements for the reconstruction of Sukkur channel bridge are in hand. Centralized Traffic Control (CTC) has been introduced between Karachi and Landhi. The various structural and engineering works, including those for increasing line capacity by improved signalling, have progressed satisfactorily. The construction of staff quarters, a spring shop at Moghalpura and a diesel shed at Lahore was completed; the construction of divisional offices at Sukkur, and a Chemical and Metallurgical Laboratory, an apprentice training centre and diesel back-shop with a repairing capacity of 200 diesel locomotives at Rawalpindi, is nearing completion.

Programme under Third Plan

22. The following are the main development requirements of the Pakistan Western Railway:—

(*i*) Replacement of overage and uneconomic assets, (*ii*) procurement of additional rolling stock, (*iii*) execution of works required to increase the line and terminal capacities, (*iv*) provision of essential amenities for passengers and railway staff (*v*) carrying out essential new constructions, (*vi*) development of indigenous capacity for the manufacture of passenger coaches and wagons, signalling and track equipment, and (*vii*) introduction of electric traction on the Khanewal-Lahore section (*see* Table I for details).

Rolling Stock

23. To meet the replacement requirements and to handle the additional traffic, the rolling stock fleet will have to be suitably augmented. The Third Plan will commence with a large proportion of overage stock. which in relation to the total fleet will be: locomotives 44 per cent, passenger carriages 35 per cent and wagons 9 per cent. Table II gives the total number of overage stock at the end of the Third Plan period, the total Plan requirements and the number expected to be delivered during the Plan period. Overage stock at the end of the Third Plan period will be: 463 steam locomotives, 704 passenger carriages, 801 other coaching vehicles, and 4,901 wagons. To provide for replacement of some of the overage stock and to meet the needs of additional traffic, the requirements during the Third Plan will be for 187 diesel electric locomotives, 696 passenger carriages, 299 other coaching vehicles and 10,000 wagons. Against these requirements, provision has been made for delivery during the Third Plan period of 138 locomotives, 576 passenger carriages, 197 other coaching vehicles and 4,710 wagons.

Track renewals

24. At the end of the Second Plan period renewal of 1,002 track miles of rails and 1,500 track miles of sleepers will be outstanding. The renewal of an additional 934 track miles of rails and 2,420 track miles of sleepers will be falling due during the Third Plan period. Of these, the programme provides for the renewal of 826 track miles of rails and 1,150 track miles of sleepers during the Third Plan period.

Bridges

25. The bridge programme under the Third Plan provides for the renewal of weak and defective wrought iron girder bridges, rebuilding of weak bridges, raising of bridges on certain sections, replacing dips by bridges, providing new flood openings and strengthening of bunds. Major works include the renewals of the Sukkur channel bridge over River Indus, the bridge over River Chenab near Muzaffargarh, the Kohad and Sohan bridges on the Daudkhel-Jand section.

Plant and Machinery

26. The replacement and balancing of machinery and equipment in the Railway's mechanical and electrical engineering workshops and the printing press will be undertaken during the Third Plan.

Signalling and Line Capacity works

27. Installation of improved signalling, which is a first step towards increasing sectional capacity, was undertaken on certain main and important branch lines during the Second Plan period, and will be extended to cover other sections of the Railway during the Third Plan period.

On a single line section, however, there is a limit upto which sectional capacity can be increased by the application of such devices. Capacity on Chak Jhumra-Sangla Hill and Hyderabad-Kotri single line sections has reached the saturation point in spite of the application of improved signalling. It is, therefore, proposed to undertake doubling of the track on these sections during the Third Plan period. Similarly, it has become necessary to provide a third line between Chaklala and Rawalpindi. It is also proposed to open a few block stations, to remodel a number of marshalling yards and to augment terminal facilities.

Workshops

28. The programme for rehabilitation, modernization, balancing, expansion and setting up of new civil and mechanical engineering workshops on the Railway includes the following major schemes: (*a*) carriage factory at Moghalpura, (*b*) metre-gauge carriage and wagonshop at Hyderabad, (*c*) rehabilitation and expansion of workshops, (*d*) manufacture of track materials, components and welding of rails, (*e*) phase II of diesel-locomotive backshop at Rawalpindi, (*f*) rehabilitation and modernization of signal shop at Lahore, (*g*) expansion and balancing of Central Mechanical Shops and rehabilitation of steel shop at Moghalpura.

Engineering and Structural works

29. Works under this head comprise rehabilitation of buildings and other assets, provision of passenger amenities and staff welfare works, other engineering projects such as road overbridges, widening of tunnels and provision of water supply and telecommunications.

Introduction of Electric Traction

30. To meet the requirements of the rapidly increasing traffic and at the same time to reduce the foreign exchange content of the Railway's operating costs, the feasibility of adopting electric traction on some of the sections on the trunk routes has been examined. Taking all aspects into consideration, the introduction of electric traction on the Khanewal-Lahore (178 miles) and Lahore-Rawalpindi (179 miles) sections, where capacity has exceeded the saturation point, has been recommended. To start with, it is proposed to take up the introduction of electric traction on Khanewal-Lahore section in the Third Plan period.

New Construction

31. The on-going schemes of (*a*) Karachi Circular Railway, (*b*) Kot Adu-D.G. Khan section, and (*c*) conversion of Hyderabad-Mirpurkhas section will be completed during the Third Plan period. In addition, provision has been made for the construction of a 19.05 miles Amruka-Wasawewala rail link and a spur from Rawalpindi to Islamabad. It is also proposed to acquire from the Irrigation Department Dera Nawabsahib-Punjnad irrigation siding (20 miles) for carriage of public traffic.

Research Centre and Training School

32. The necessity for an organisation for research and adoptive studies has been felt for a long time. During the Third Plan period it is proposed to set up a

properly equipped Research Centre on modern lines to carry out detailed studies relating to problems now awaiting solution and those likely to arise in the implementation of various projects of the Railway. The first phase of the scheme comprising construction of buildings and procurement of equipment will be completed during the Plan period.

The available facilities for technical training of employees of the Civil Engineering Department are inadequate. In order to impart rigorous and specialized training to the staff in the rapidly changing techniques and modern trends, it is proposed to establish a training school for civil engineering staff. It will provide training facilities not only to workmen and supervisors in service but also to a large number of technical personnel engaged in the planning and execution of development projects. During the Third Plan period construction of a school building, workshop and staff quarters, and provision of training facilities is envisaged under Phase I of the scheme.

PAKISTAN EASTERN RAILWAY

Assessment of Traffic

33. (*a*) *Goods Traffic.* There has been a rising trend in goods traffic, which reached a figure of 1,052 million ton-miles by 1963-64, although it declined in the final year of the Plan, due mainly to a fall in food grain imports.

In consideration of the accelerated pace of development envisaged in all fields in East Pakistan during the Third Plan period, and making due allowance for the growth of road and water transport, it is anticipated that during the Third Plan period the increase in freight ton-miles on the Pakistan Eastern Railway will be about 30 per cent.

(*b*) *Passenger Traffic.*—Similarly passenger-miles reached a figure of 2,003 million in 1963-64, but were a little lower in the following year. Taking into account the increased economic activity, rise in population and the accelerated pace of urbanization during the Third Plan period, it is anticipated that the increase in Railway passenger-miles by the end of the Plan period will be about 15 per cent.

Progress under Second Plan

34. For the rehabilitation, modernization and expansion of facilities during the Second Plan period an allocation of Rs. 427.7 million was made, Rs. 62.6 million for the completion of ongoing projects, and Rs. 365.1 million for new works. The programme was subsequently enlarged to include a few more schemes of rolling stock, construction of new railway lines, structural and engineering works, etc.

35. In financial terms, an expenditure of Rs. 486 , million is expected to be incurred by the end of the Plan period. In physical terms, most of the targets will have been achieved as indicated below.

Rolling-Stock

36. Arrangements have been completed for the procurement of the entire rolling stock envisaged in the Plan, *viz.*, 59 locomotives, 336 passenger carriages, 110 other coaching vehicles, 5,837 wagons, 196 special type wagons, 2 tugs and 4 barges. Of these 45 locomotives, 336 passenger carriages, 4 railcars and 8 trailers and 5,837 wagons are likely to be received by the end of the Plan period, while the remaining stock will be delivered in early Third Plan period. In addition, 6 M.G. diesel electric locomotives procured by the Pakistan Western Railway have been exchanged for 10 M.G. steam locomotives.

Track

37. Against the target of 207 track miles of rail and 771 track miles of sleeper renewals, the actual accomplishment is expected to be 245 and 677 track miles, respectively.

Construction of new lines

38. Substantial progress has been made on the Dacca Realignment project. Work on double-tracking sections of the Dacca-Chittagong railway, construction of Narsingdi-Madanganj, Kurigram-Chilmari railway and Bholaganj-Chhatak ropeway is progressing satisfactorily. Preliminaries to start construction of new railway lines from Faridpur to Barisal and Ruhea to Pochagrah, and conversion of Rupsa-Bagerhat section from N.G. to B.G. have been completed.

Other major projects

39. Progress on the various structural and engineering works has been satisfactory. The programme of relay inter-locking, and tokenless block working will be completed by the end of the Plan period.

Programme under Third Plan

40. The developmental requirements of the Pakistan Eastern Railway are similar to those of Pakistan Western Railway, *viz.*, replacement of overage and uneconomic assets, procurement of additional rolling stock, execution of works required to increase the line and terminal capacity, provision of essential amenities for passengers and railway staff, construction of new railway lines where justified by traffic operating needs, development of indigenous capacity for manufacture of passenger coaches and wagons, and signalling and traffic equipment. (*see* Table III for details.)

Rolling Stock

41. To meet the replacement requirements and to handle the additional traffic, the rolling stock fleet will have to be suitably augmented. The Third Plan will commence with a large proportion of overage stock, which in relation to the total fleet will be: locomotives 60 per cent, passenger carriages 27 per cent

and wagons 40 per cent. Table IV gives the total number of overage stock at the end of the Third Plan period, total Plan requirements and the number expected to be delivered during the Plan period. Overage stock at the end of the Third Plan period will be: 96 B.G. and 140 M.G. steam locomotives, 176 B.G. and 327 M.G. passenger carriages, 132 B.G. and 186 M.G. other coaching vehicles, and 1,054 B.G. and 7,207 M.G. wagons. To provide for replacement of some of the overage stock and to meet demand of additional traffic, the requirements during the Third Plan period will be 38 B.G. and 85 M.G. diesel electric locomotives, 252 B.G. and 436 M.G. passenger carriages, 86 B.G. and 96 M.G. other coaching vehicles, and 850 B.G. and 5,600 M.G. wagons. Against this, provision has been made for delivery during the Plan period of 29 B.G. and 50 M.G. diesel locomotives, 189 B.G. and 247 M.G. passenger carriages, 54 B.G. and 149 M.G. other coaching vehicles, and 500 B.G. and 2,996 M.G. wagons.

Track Renewals

42. The Second Plan will close with a large mileage of track having worn out sleepers and rails over 40 years old. Also, to extend diesel-electric traction, some of the sections will need to be relaid with heavier rails. This will necessitate the renewal of 600 miles of track. The Third Plan programme provides for the renewal of about 400 miles of track. This includes the Dacca-Chittagong section where maximum permissible speed is proposed to be raised from 45 to 60 M.P.H. through renewal with heavier rails and flatter turn-outs, increased sleeper density and ballast cushion. Welding of rail joints is also proposed to be undertaken on this section as a step towards modernization.

Bridges

43. Most of the existing railway bridges were constructed some 50/60 years and some even a hundred years ago and it has become necessary to change the wrought iron girders on these bridges. The triangulated spans of some of the major bridges also require to be changed. A beginning was made in the Second Plan when some of the smaller bridges were tackled. In the Third Plan period, it is proposed to change the spans of the major bridges also in order to remove the present speed restrictions.

Signalling and line capacity works

44. The line and terminal capacities of the Railway are proposed to be increased by the installation of improved signalling and remodelling of yards and terminal facilities. The track on certain short sections, including Chittagong-Sholashahr, Fouzdarhat-Chittagong Port marshalling yard is also proposed to be doubled.

Plant and Machinery

45. Provision has been made for plant and machinery for various engineering workshops, printing press and telecommunications on the entire Railway system.

Workshops

46. The programme includes the expansion and improvement of the existing Saidpur and Pahartali workshops and also the setting up of a carriage and wagon factory and a shop for the manufacture of permanent way fittings.

Other Engineering and structural works

47. These include the rehabilitation of buildings and other assets, provision of passenger amenities, staff welfare works, certain engineering works and water supply schemes.

New Construction

48. The following ongoing projects will be completed: (*a*) Doubling of track on sections between Chittagong and Dacca; (*b*) Construction of Faridpur-Barisal and Ruhea-Pochagrah railway lines; and (*c*) Conversion of Rupsa-Bagerhat section from narrow to broad guage. Under new construction the major project will be the Khulna-Mongla B.G. railway line (32 miles) including provision of rail-*cum*-road bridge over River Rupsa to extend the railway line from Khulna to the proposed new port at Mongla.

ROADS AND ROAD TRANSPORT

49. Roads and road transport provide an ideal means of connecting the widely scattered rural communities, opening up new areas to development, widening the domestic market and performing the diverse types of transport functions related to the processes of industrialization and economic growth. These facilities in Pakistan are grossly inadequate and need to be developed extensively. Such an expansion, however, would require very large investments, and the possibilities of a "big push" in this field would be determined by the availability of resources. In the meantime, utmost emphasis will have to be placed on measures directed towards deriving maximum benefits from the existing facilities and from each unit of investment to be made. In this context, the following measures will need to be taken:

A.—Roads

i) a careful classification or categorization of roads to avoid over-investment in relation to traffic density;

ii) evolution and use of low cost road-building techniques, based on local materials;

iii) development of effective organizational, institutional and financial arrangements to ensure efficient construction and proper maintenance of different categories of roads;

iv) concentration of effort on the completion, within the Plan period, of individual projects, or parts thereof, so that benefits from investments are realized quickly; and

v) execution of highway projects *in stages*, in conformity with prescribed geometric standards and specifications, so that each stage conforms to the anticipated volume of traffic in the short run, and the highway is developed in gradual stages to take higher volumes and loads of traffic.

B.—Road Transport

vi) provision of adequate repair and maintenance facilities to ensure optimum use of available fleet;

vii) development of indigenous capacity for the production of commercial vehicles and spare parts to meet the country's total requirements;

viii) encouraging the use of trailers with buses and trucks, where justified by traffic and road conditions, to increase transport capacity at low cost;

ix) encouraging the formation of transport syndicates and co-operatives to ensure an efficient service.

ROADS

50. The factors which in the past have mainly tended to inhibit the growth of road net-work along sound lines have been:

i) construction effort was diffused over a number of projects;

ii) maintenance and improvement of existing road network suffered due to lack of adequate finances;

iii) programmes were based on inadequate standards and specifications; and

iv) research activities for evolving suitable techniques of construction based on local conditions and materials could not be adequately developed.

51. The road programme under the Third Plan, which seeks to rectify the situation, aims at an optimum expansion of the net-work in keeping with the growing need for mobility. It provides for:

i) strengthening and expansion of the existing road network;

ii) developing a system of super highways;

iii) construction of secondary and feeder roads to meet the needs of the short distance, light traffic in rural areas and newly developing regions of the country; and

iv) expansion of research facilities.

For the proper maintenance of roads, efforts will be made to provide adequate funds on a regular basis. For, obviously, while large-scale investments are made on new projects, the existing net-work cannot be allowed to deteriorate for lack of funds.

ROADS IN WEST PAKISTAN

Progress under Second Plan

52. Including the ongoing road and bridge projects, the Second Plan programme for West Pakistan provided for the completion of 2,075 miles of new roads and improvement of 1,450 miles of existing roads under the Provincial Government, construction/improvement of about 300 miles of roads in Frontier Regions, 38 miles in Sor Range-Degari Coalfields and improvement of certain roads and construction of Malir bridge in Karachi area.

53. Expenditure during the Second Plan is estimated at Rs. 297.8 million against the allocation of Rs. 275.6 million. Achievements in physical terms are expected to be as follows:

		Miles
Provincial Programme		
a) New roads constructed	(Blacktop roads 700 miles) (Shingle roads 225 miles) (Katcha roads 380 miles) ...	1305
b) Existing roads improved ...	... ...	375
Central Programme		
a) Roads in Frontier Regions—constructed/improved	...	300
b) New roads in Sor Range-Degari Coalfields constructed	...	38

Besides, a major part of the road programme in Karachi area and the construction of Malir bridge will be completed.

54. The factors which largely contributed to the shortfall in the achievement of physical targets were as follows:

a) relative to the funds allocated the targets were set too high;

b) higher standards and specifications had to be adopted for trunk roads to meet the increasing load requirement; and

c) higher prices and wages than anticipated had to be paid.

55. The machinery for the preparation and implementation of road programme is being re-organized which would make possible (*a*) completion of a large number of ongoing projects in the early part of the Third Plan period; and (*b*) a much larger programme to be implemented during the Third Plan.

Programme under Third Plan

56. The Third Plan programme (for details *see* Table V) includes, besides new works, ongoing projects of construction of Karachi-Hyderabad super highway; bridges over Jhelum at Jhelum, over Ravi near Lahore and Chichawatni, over Indus near Thatta, and over Sutlej near Bahawalpur; and construction/improvement of about 560 miles of roads. Besides a number of feasibility studies for roads and bridges for which aids/loans are being contracted will be completed. The physical targets are summarized below:

	Miles
1. Ongoing roads projects including bridges over Rivers Jhelum, Sutlej and Indus	650
2. Reconditioning and widening of existing blacktopped roads	200
3. Superior type highways including bridge at D.I. Khan ...	300
4. Other new roads	375
5. Improvement of Karachi-Quetta-Zahidan road (R.C.D. project)	650

ROADS IN SPECIAL AREAS

57. The Centrally administered areas in the extreme north of West Pakistan lack even the barest minimum transport facilities and some parts are entirely inaccessible. Essential supplies to this region have to be air-lifted and local movement depends on pony-tracks and some jeepable roads. Development of transport facilities in these areas, therefore, needs to be given the highest priority not only to promote economic development but also to maintain the normal life of the community.

Progress under Second Plan

58. Against the allocation of Rs. 43.37 million for the construction/improvement of roads and bridges in the Special Areas, an expenditure of Rs. 49.7 million is expected by the end of the Second Plan period. The Malakand-Gilgit road is expected to be completed and the targets set for other areas achieved.

Programme under Third Plan

59. During the Third Plan period, improvement of about 600 miles of existing roads/tracks and construction of about 650 miles of roads/tracks and bridges is programmed.

ROADS IN EAST PAKISTAN

Progress under Second Plan

60. The Second Plan targets were (*i*) to complete 740 miles of new roads, work on which was commenced prior to July 1960, and (*ii*) to construct another 130 miles of new roads. The performance under the Plan has been satisfactory with

an expected construction/improvement of 979 miles of roads besides 52,600 running feet of bridges and culverts.

Expenditure during the Second Plan is expected to be Rs. 411 million against the allocation of Rs. 250 million. The increase in expenditure is mainly due to (*i*) inclusion of many non-Plan projects and feasibility studies of certain important roads and bridges; (*ii*) adoption of improved specifications; and (*iii*) increase in prices.

Programme under Third Plan

61. The Third Plan programme (for details *see* Table VI) includes the following major ongoing schemes, besides new works:

i) Dacca-Sarail section of the Dacca-Sylhet road;
ii) Dacca-Chittagong-cum-Narayanganj road; and
iii) Dacca-Joydebpur-Aricha road.

Physical targets of the Third Plan are summarized below:

	Miles
Ongoing works of the First and Second Plans	800
Improvement of existing roads	300
Construction of new roads, bridges over Buriganga and Karnafuli rivers, and feasibility study of bridging the other major rivers	250

ROAD TRANSPORT

62. With its flexibility of operation and door-to-door accessibility, motor transport provides the most efficient and economical method of moving special types of cargo, small consignments and short-haul traffic of all descriptions. Accordingly, as the nature and pattern of traffic is undergoing rapid diversification with structural changes in the economy, road transport is playing an increasingly important role, particularly in West Pakistan. Its most significant role, in the context of overall socio-economic development, arises from its ability to provide efficient transport facilities at low initial cost to the vast and isolated rural areas of the country.

Progress under Second Plan

63. Under the Second Five Year Plan, a substantial increase in the number of buses and trucks has been achieved, besides provision of ancillary facilities. Private operators will have procured about 1,100 buses and 5,500 trucks in East Pakistan, and about 5,000 buses and 11,800 trucks in West Pakistan. In addition, the E.P.R.T.C. will have acquired 234 buses, the W.P.R.T.C. 863 buses (including 197 double-deckers) and the K.R.T.C., which has since been de-nationalized, 196 buses (including 24 double-deckers). This will mean a doubling of the fleet in East Pakistan, a 50 per cent increase in West Pakistan and 70 per cent for the country as a whole.

At the beginning of the Third Plan, there will be a total of about 11,100 commercial vehicles in service in East Pakistan; about 41,000 in West Pakistan. Of this fleet, about 3,600 vehicles in East Pakistan and 13,100 vehicles in West Pakistan will be over 10 years of age, which approximates the economic life of a commercial vehicle.

64. Notwithstanding the rapid progress made during the Second Plan, the commercial motor transport industry is still in a very under-developed state. The number of buses and trucks is grossly inadequate compared to needs; whatever vehicles are available are generally not fully utilized due to inefficient operation and poor maintenance; and barring a few well-organized firms and corporations, the industry is made up of small individual operators, who are unable to organize and develop the industry along modern, progressive lines and to provide a reliable and efficient service. The industry which is almost entirely financed by private enterprise (barring the two corporations in East and West Pakistan engaged in passenger transport) needs considerable improvement both as regards its performance and organization. The major effort during the Third Plan will therefore have to be directed towards improving institutional arrangements to ensure its growth along sound lines.

65. A major handicap in planning for the development of road transport is the lack of statistical information in this field. The exact position of the road transport fleet and its activities is not known. There is no information about how much of what commodities is handled by road transport and between what points or areas. In the absence of these details, it is impossible to determine with any exactitude the present or potential role of road transport in the economy. Detailed transport studies being undertaken in the two provinces are expected to provide necessary information on these lines. Special arrangements will have to be made for the collection, compilation and analysis of data with a view to ensuring an adequate development of road transport services.

66. Another shortcoming is that the machinery for the control, regulation and promotion of the road transport industry is not adequately organised to take care of the greatly expanding requirements. The Provincial and Regional Transport Authorities, therefore, need to be re-organized and strengthened so as to be able to perform their regulatory and promotional functions effectively. In this context, the Motor Vehicles Act needs to be revised so as to help foster the growth of road transport along desired lines.

67. The two specific problems which need urgent attention relate to the need for (*a*) improving passenger transport in urban centres; and (*b*) providing essential trucking services in the under-developed rural areas.

(*a*) The present state of affairs in the field of passenger bus transport demands a serious consideration of the extent to which the public sector should step into this field. In the fast developing urban areas in particular, where the problem needs more urgent attention, it is necessary that passenger transport is organized not mainly on the narrower considerations of profit-making, but as a public utility so as to provide a safe, reliable and reasonably comfortable service. Such an improvement in public transport will also attract persons in higher income brackets and will thus have the advantage of reducing the demand for private cars and incidentally reducing congestion on roads.

These objectives can best be met by entrusting the management of passenger road transport in the urban areas to the Government sector, with maximum participation that it can obtain from the private sector in financing and management. The implementation of the above stated policy will have to proceed in gradual stages. It can begin with the big urban centres and then spread to other urban areas as more experience is accumulated. Serious attention will be given immediately to developing efficient organizations in the public sector to run these services on modern lines.

(*b*) In the countryside, transport facilities are particularly inadequate. Considering the general tendency on the part of truck operators to stick to bigger and more lucrative routes, it seems necessary to ensure that essential requirements of the rural areas are adequately met. For instance, the permit issuing authority could require that every operator licensed to run a service on a metalled road should also run a service on an all-weather, Katcha road of the same zone, thus providing essential village-to-market service. Another approach may be to give attractive tax concessions in respect of operations in less developed areas or on poor roads. The Government of West Pakistan might also like to ascertain in this connection whether the recent removal of zonal restrictions on the operation of trucks has caused any serious shortage of transport on less lucrative routes.

68. Some of the important measures that must be taken to ensure a healthy growth of the road transport industry are summarized below:

(*i*) The Provincial and Regional Transport Authorities should be re-organized and the Motor Vehicles Act revised.

(*ii*) Arrangements for the collection, compilation and analysis of statistical data should be made on a continuing basis.

(*iii*) Formation of viable operating concerns like syndicates and co-operatives should be encouraged with a view to alleviating the industry's organizational, financial and operational problems. Also to ensure a common approach to the various problems concerning the development and efficient operation of the industry, and to provide a liaison with relevant government agencies, it would be advisable to establish a federation of the road transport industry.

(*iv*) Adequate arrangements should be made for providing essential credit facilities to private operators.

(*v*) Steps should be taken for setting up adequate manufacturing/assembly capacity for commercial vehicles and spare parts within the country. Meanwhile, imports should be liberalized to supply the industry's total requirements adequately and to permit fuller use.

(*vi*) Adequate facilities for the repair and maintenance of vehicles and for the training of drivers and mechanics should be developed.

(*vii*) Standardization of vehicles must be ensured in the interest of satisfactory maintenance and operation.

(*viii*) In connection with the development of trucking services, a study should be made as to whether the Road Transport Corporations engaged in passenger transport should extend their activities to freight haulage, provided such a course does not involve any government financing.

(*ix*) Measures should be taken to improve passenger transport in urban centres and to provide essential trucking services in rural areas.

Programme under Third Plan

69. The Third Plan provides, *inter-alia*, for the procurement of 30,500 commercial vehicles—13,500 for East and 17,000 for West Pakistan. Allowing for replacement of vehicles which are over 10 years old—at assumed rates of 100 per cent for East and 50 per cent for West Pakistan—the net additions to the fleets will be about 40 per cent—90 per cent in East Pakistan and 25 per cent in West Pakistan. In terms of carrying capacity, however, the net increase will be much higher because most of the new vehicles will be of larger size and the overall availability will improve appreciably with better maintenance of vehicles and improved road facilities.

70. The programme envisages acquisition of 7,330 buses and 20,000 trucks by private operators; 2,270 buses by the West Pakistan Road Transport Corporation (770 for replacement of old vehicles and 1,500 as additions); and 900 buses by the East Pakistan Road Transport Corporation (154 for replacement and 746 as additions). The programmes include provision for workshops, training centres, bus depots and passenger shelters. The Government will also contribute towards the development of transport cooperatives in East Pakistan.

71. It must be stressed that the programme envisaged above is based on a modest estimation of the possibilities in the private sector. Given adequate facilities and encouragement, the actual investment may exceed the allocation.

INLAND WATER TRANSPORT

72. Inland Water Transport (I.W.T.) contributes a major share in the haulage of goods and passengers in East Pakistan. The factors which have worked for an

accelerated growth of I.W.T. traffic in recent years include the increased volumes of imports and exports through Chalna; the rapid growth of industrial plants, which tend to concentrate on water fronts; the substantial improvements in waterways and navigational facilities; and modernisation of river craft during the Second Plan period. Foreign exchange allocations for I.W.T. have been increased considerably for successive shipping periods during the Second Plan period, until in 1964 the import of marine engines and spare parts was placed on O.G.L. During the first four years of the Second Plan the freight and passenger capacities of the mechanized fleet are estimated to have increased at an average annual rate of over 6 per cent.

73. The traffic currently being handled by I.W.T. cannot be assessed precisely due to lack of adequate information concerning the vast number of unregistered country boats engaged in commercial operations, which are believed to account for much larger volumes of traffic than the mechanised fleet. On the basis of very rough estimates prepared by the I.W.T.A. in July, 1963, the "for hire" country craft accounted for about 85 per cent of the total commercial I.W.T. traffic in terms of tonnage and about 74 per cent in terms of ton-miles. The preponderance of I.W.T. in the transport picture of East Pakistan under-scores the need for its rapid improvement. It is believed that given suitable navigational and terminal facilities and organised on sound, progressive lines, I.W.T. can become the most economical and effective mode of transport in the Province, which abounds in natural waterways.

Progress under Second Plan

74. The schemes completed in the semi-public sector under the Second Plan include provision of navigational aids, a workshop and a jetty at Barisal; procurement of launches and salvage craft; provision of ferries, terminals, launch landing stations, and jetties for handling food grains at some places; and survey and investigation of inland river ports. Schemes in progress relate to improvement of the waterway from Narayanganj to Chalna; survey of navigable channels; Decca Chain Radio location system; development of inland river ports and 50 additional launch stations. Some progress was made on the schemes for providing port facilities in cyclone affected areas and a repair yard for ferries. Seven Consultants were appointed to advise the Inland Water Transport Authority in discharging its developmental functions. Consultants were also appointed to conduct surveys of ports and waterways. In consideration of the marked decline in the coastal services provided by private enterprise, the East Pakistan Shipping Corporation has been set up to provide these and other essential services in the semi-public sector. Under this scheme, a fleet of 12 ferries, 4 coastal ships, 4 LCT's and 10 MOT's will have been procured by the end of Plan period. An expenditure of Rs. 139.8 million is likely to be incurred on these schemes during the Plan period.

75. In the private sector, an investment of about Rs. 175 million will have been made by the end of the Second Plan period, including about Rs. 135 million for the procurement of mechanized watercraft, necessary spare parts, structural materials, and workshop equipment. Investments also relate to dieselization and rehabilitation of the existing fleets; improvement of dockyards and slipways; and construction of shore establishments.

76. In physical terms, 23 towing vessels, 163 dumb barges, 6 oil tankers, 220 passenger launches, 7 passenger-*cum*-cargo vessels, and 25 river-*cum*-sea vessels will have been acquired by the end of the Second Plan period. It is estimated that the cargo carrying capacity of the mechanised I.W.T. fleet will have increased by 27 per cent from 153,000 tons to 194,000 tons and the annual through-put by 61 per cent from 217 million to 350 million ton-miles. Similarly, the passenger carrying capacity will have increased by 36 per cent from 81,000 to about 110,000 passengers.

77. Considering the past trends in traffic as well as the implications of factors like the increased tempo of industrialization in East Pakistan, the prospect of larger volumes of imports and exports using the port of Chalna and the outer anchorage at Chittagong and the great improvement foreseen in basic I.W.T. facilities and mechanization of fleets, it is expected that inland water transport will be handling increasingly large volumes of traffic during the Third Plan period. In respect of passenger transport, the trend seems to be towards short-lead traffic by smaller craft such as launches and medium capacity steamers. This trend will be intensified with the expansion of the road network programmed under the Third Plan.

78. The main emphasis in the development of I.W.T. will be:—

(*a*) in the public sector, on the development of terminal facilities at inland ports, development of waterways and aids to navigation and facilities for training of I.W.T. personnel and research for the mechanization of country craft; and

(*b*) in the private sector, on the rehabilitation and modernisation of the existing fleet, adoption of new techniques of construction and operation, and provision of additional repair and building facilities. In this connection, pilot projects are being set up for introducing modern craft such as Catamarran and hydrofoil boats for faster passenger transport.

79. A problem of basic importance relates to the organisation of I.W.T. operators along sound and progressive commercial lines. The industry is disorganised at present and effective measures of persuation and regulation would be necessary to improve the situation. It is proposed to take necessary steps for developing a healthy co-operative movement in the I.W.T. industry, which may prove to be a decisive element in solving the industry's organisational and financial

problems and ensuring its proper growth. The numerous individual operators will also be encouraged to organise themselves into syndicates and to form their association with a view to facilitating the development of I.W.T. and ensuring the provision of a safe, economical and reliable transport service.

Programme under Third Plan

80. The inland water transport programme envisages expansion of capacity and provision of basic navigational and terminal facilities. The programme in the government financed sector will comprise completion of ongoing projects, development of selected major and minor ports and launch landing stations, development of waterways and aids to navigation and establishment of training facilities and river craft design centre. In the private sector, it will include augmentation, modernization and replacement of I.W.T. fleet, and expansion of dry docks and slipways (*see* Table VIII for details). By the end of the Third Plan, perennial and seasonal navigational channels will be 3,869 and 1,138 miles respectively.

PORTS

81. As would be evident from the following figures, the traffic through the ports of Karachi, Chittagong and Chalna has been increasing at a rapid rate. During the Second Plan period, the increase is expected to be of the order of about 58 per cent: 62 per cent at Karachi and 54 per cent at Chittagong and Chalna together.

Traffic through the Ports

(Thousand tons)

	1954-55	1959-60	1964-65 (Projected)
Karachi Port	3,072	4,503	7,300
Chittagong Port	1,392	2,644	3,800
Chalna Anchorage	479	866	1,600
Total	4,943	8,013	12,700

82. The present designed capacity of the Karachi Port is about 4.5 million tons (3.5 million tons dry cargo and 1 million tons petroluem products) that of Chittagong about 3 million tons (2.3 million tons dry cargo and 0.7 million tons petroleum products) and of Chalna about 1.5 million tons all dry cargo. However, the ports have had to handle much larger volumes of traffic, working under severe stresses and strains arising mainly from large-scale imports of foodgrains, especially during the peak periods of internal traffic. The impact of foodgrain traffic on port capacity will be evident from the fact that in the Second Plan period, it constituted about 20 per cent of the total imports, and in the Third Plan period also its share is likely to be quite substantial.

Programme under Third Plan

83. Considerable expansion and modernization of port facilities will, therefore, have to be undertaken to meet the requirements of the rapidly increasing volume of overseas trade, which by 1970 is estimated to reach a figures of about 17 million tons including petroleum products. The Third Plan programme provides for the construction of a fullfledged port at Chalna, rehabilitation of old and construction of new berths at Chittagong and Karachi, procurement of craft and equipment to speed up port operations, and expansion of other ancillary facilities. For the handling of foodgrains, the installation of silos at the three ports and of similar storage facilities in the interior is under examination. The feasibility of establishing a second port in West Pakistan is also under study.

84. With the completion of the Third Plan programme, the designed capacity of the ports of Karachi, Chittagong and Chalna (including the present anchorage facilities) for dry cargoes will increase to 4.2 million tons, 3.8 million tons and 3.5 million tons respectively, against the projected dry cargo traffic for 1969-70 of 5.5 million tons for West Pakistan and 6.5 million tons for East Pakistan. The gap between the capacity and requirements in the case of Karachi port will be narrowed substantially by the construction of foodgrain silos and related facilities. The capacity for handling petroleum products will increase to 2 million tons at Karachi and 1 million tons at Chittagong. An oil terminal is also to be constructed at Chalna port to meet any additional requirements.

85. Until the completion of the Third Plan programme, the ports of Karachi and Chittagong may have to continue to work under the stresses and strains experienced during the Second Plan period. To cope with the increasing demands, short-term measures such as proper programming of foodgrain imports, improving handling and clearance arrangements at the ports in particular for foodgrains, and greater use of the Chittagong Outer Anchorage facility will have to be taken. In the case of West Pakistan, where the expansion of Karachi port facilities is limited by the availability of space, the need for developing a subsidiary port appears necessary.

86. Developments during the Second Plan period and those proposed to be taken up during the Third Plan are described below.

KARACHI PORT

Progress under Second Plan

87. The Second Plan provided for the completion of the remaining work of berths No. 5 to 17 at East Wharves, reconstruction of berths No. 1 to 4 at East Wharves and the Bulk Oil Pier, rehabilitation of Manora Breakwater, acquisition of craft and equipment, and certain other works. Against this provision, the remaining work of the Reconstruction of Berths No. 5 to 17, construction of sea

wall, reclamation of land for Oil Refinery and construction of 256 quarters and a hospital were completed; a 60 tons floating crane, one bucket dredger and 20 road vehicles were purchased; and arrangements were made for the delivery of another bucket dredger and two hopper barges in early Third Plan period. Survey and investigations for the reconstruction of berths No. 1-4 and rehabilitation of Manora Breakwater were completed. The new oil jetty under construction will be in commission by September, 1965. The rapid growth of traffic indicated the need for the provision of three additional berths at West Wharf and improvement of the Main Navigable Channel which were subsequently included in the programme and preliminaries to start the work completed. An expenditure of Rs. 100 million is likely to be incurred during the Second Plan period.

Programme under Third Plan

88. On the basis of present traffic which was 4 million tons in the first six months of 1964-65 the port is at the moment short by about six berths. No additional berths can be built till a new West Wharf is reclaimed. The programme, therefore, provides for the development of port capacity in the Third Plan period to the maximum feasible extent consistent with the space available for the construction of additional berths. The new schemes for land reclamation proposed during the Third Plan period will form a base for major expansion of port facilities in subsequent years. Major projects included in the Third Plan are:

Reclamation and development of new West Wharf (Phase I).
Reclamation and development of new Oil Berth (Phase I).
Construction of lighterage berth at Juna Bunder.
Replacement and purchase of craft and equipment and other civil engineering works.

Provision has also been made for the preparation of a Master Plan for the port. (*See* Table IX for details).

CHITTAGONG PORT

Progress under Second Plan

89. The Second Plan provided for river training works, river lighting, procurement of certain urgently needed craft and equipment and residential accommodation for staff. Against this, a twin screw dredger, patrol launch, two barges, pilot launch and buoy lifting and mooring vessels were acquired. Facilities for night navigation were introduced. The river training project and construction of staff quarters were in progress. In addition, necessity arose to rehabilitate jetty berths No. 1-6 and to procure certain ancillary equipment which was seriously damaged by the cyclones in 1960 and 1963. Provision of a 1,200 tons slipway along with a workshop and procurement of equipment for mechanical handling of Cargo and off-shore oil installations consequent upon the setting up of an oil refinery were also found necessary and these were included in the programme. An expenditure of Rs. 23.2 million is expected to be incurred during the Second Plan period.

Programme under Third Plan

90. Apart from ongoing projects, new projects which will be taken up during the Third Plan period are: construction of 4 additional jetties, replacement of pontoon jetties by permanent jetties, river training works (Phase II), construction of a lighterage jetty, construction of one transit and two storage sheds rehabilitation of four old sheds, construction of staff quarters and replacement and purchase of craft and equipment. (*See* Table X for details).

CHALNA PORT

Progress under Second Plan

91. The Second Plan provided for the expansion of the anchorage facilities at Chalna for meeting the increasing traffic demands arising from steps taken to reduce the imbalance between the import and export traffic passing through two ports of Chittagong and Chalna. By the end of the Second Plan period, an expenditure of Rs. 8.7 million will have been incurred on the purchase of vessels and jetty equipment and construction of embankment for fresh water reservoir, workshop building, rest house, harbour master's office and staff quarters.

Programme under Third Plan

92. The feasibility report incorporating a master plan for the development of a permanent port at Mongla on the east bank of river Pussur, has been prepared. It recommends the completion of Phase I of the master plan during the Third Plan period, which envisages (*a*) construction of eight general cargo berths, a foodgrain, a bulk cargo and an oil terminal along with development of residential and administrative areas; and (*b*) extension of the railway line and the roadway from Khulna to the port and construction of a rail-cum-road bridge over the Rupsa river. Provision for these works has accordingly been made under the Central and Provincial Programmes, respectively.

MEKRAN COAST PORT

93. At present, Karachi is the only major port serving the entire export and import trade of West Pakistan including the in-transit traffic to and from Afghanistan. A feasibility study is, therefore, underway for the establishment of a second major port on the Mekran Coast. A port in this area with a suitable road network will help to develop the potential resources of the vast hinterland and also provide a good measure of flexibility in the distribution of the total overseas traffic of West Pakistan.

SHIPPING

94. A large share of the country's international traffic, which amounted to 9.7 million tons in 1963-64, and is likely to go up to 15 million tons by 1970, is at present carried by foreign ships, causing a drain on foreign exchange resources to the extent of about Rs. 400 million.

Progress under Second Plan

95. At the beginning of the Second Plan period, Pakistan owned a total of 26 ships, mostly employed on the coastal route, handling about 700,000 tons of cargo a year between the two wings. Provision was initially made in the Second Plan for the acquisition of two oil tankers and 11 ships for coastal and Haj traffic and for limited participation in international traffic. Subsequently, under an agreement with the Conference Lines, the share of Pakistan shipping in the trade between Pakistan and U.K./North Continent was raised from 12.5 per cent to 31.25 per cent from the 1st of January, 1963, escalating further by 1 per cent each year and going up to 39 per cent by the 1st of January, 1971. The share of Pakistan shipping in the trade between India and U.K./North Continent was also raised from the 1st of July, 1962 onwards from 2.5 per cent to 5 per cent. To meet these requirements and at the same time to improve efficiency of the service, a National Shipping Corporation was set up in 1963 with Government participation and provision was made for the acquisition of 35 ships—16 for replacements and 19 as additions. By the end of the Plan period Pakistan will have a fleet of 52 ships with 498,000 D.W. tons, while the remaining ships under the programme will be delivered early in the Third Plan period.

Programme under Third Plan

96. The programme envisages the expansion of the fleet on existing routes and the extension of operations to the Far East and the Persian Gulf. It provides for the acquisition of another 50 ships during the Third Plan period—14 for replacement and 36 as additions. The existing facilities at the Karachi Shipyard are being developed in collaboration with Yugoslavia for the construction of vessels of about 12,000 D.W. tons, and a ship is already under construction at the shipyard. The strength of the fleet is likely to rise to 98 ships, with 958,000 deadweight tons by the end of the Plan period.

Mercantile Marine Academy and Seamen's Training Centre

97. An academy has been established at Juldia Point near Chittagong to train personnel for the Merchant Fleet. To meet the growing requirements of personnel it is proposed both to enlarge the present Academy and to develop training facilities for seamen in East and West Pakistan.

Navigational Aids on the Coasts of Pakistan

98. The provision of navigational facilities is an international obligation and a statutory requirement under the Light House Act, 1927. Considering the inadequacy of these essential facilities on our coasts, about which there have been serious complaints from international shipping, it is proposed to rehabilitate and improve the coastal lights, so as to ensure safe navigation.

TOURISM

99. Statistical data released by the International Union of Official Travel Organisations indicate that the world tourist traffic and spendings have been rising steadily. Tourist traffic and spendings in Pakistan also have shown a rising trend in recent years. The number of foreign tourists increased from 48 thousand in 1960 to 69 thousand in 1963, and the tourist spendings from Rs. 29 million to Rs. 42 million. With its numerous places of historical interest and scenic beauty, the country can attract tourists in much larger numbers, and for longer periods of stay, provided tourist facilities of the requisite standard are made available. It is considered that a properly developed tourist industry can make significant contribution to the country's foreign exchange resources and the national income, besides other benefits.

Progress under Second Plan

100. The Second Plan provided for the development of tourism by strengthening the publicity, organisation, construction of rest houses, hunting lodges and providing road and water transport at places where private investment was not forthcoming. Construction of 10 major hotels was undertaken in both Wings of the country of which 8 have been completed and 2 are at an advanced stage of completion. An expenditure of Rs. 10.4 million in public sector and Rs. 100 million in private sector will have been incurred.

To provide more intimate contact between international tourists and the transport agency, the tourist organisation has recently been placed under the control of the Chief Administrator of Civil Aviation. This arrangement is expected to help accelerate the development of tourism.

Programme under Third Plan

101. The programme in the public sector will include provision of rest houses and transportation and recreation facilities, mainly in Chittagong Hill Tracts, the Sunderbans, Gilgit, Hunza and Chitral. Certain important places of historical, archaeological and other interests will be developed. Facilities will be provided for mountaineering, winter sports, fishing, hunting and sight-seeing tours. A publicity campaign, organised in collaboration with international travel and tourist organizations, will form an important part of the plan to promote tourism. The campaign will include large-scale production of publicity materials, and display of tourist films in foreign countries on TV and the screen. Training facilities for the hotel staff and for persons engaged in the promotion of tourism will be arranged. The development of hotels will be mainly financed by private enterprise, which has been given liberal tax concessions and will be provided all the necessary facilities and encouragement.

A 20-year master plan for the development of tourism has been prepared and is under Government's consideration.

102. With the implementation of the Third Plan programme, the number of foreign tourists is expected to increase to about 200,000 and their average stay prolonged from 3 days to 6 days, resulting in a manifold increase in foreign exchange earnings from this source.

CIVIL AVIATION

103. Air transport is of crucial importance to Pakistan because of the geographical separation between its two provinces, the long distances in West Pakistan and the slowness of surface transportation in riverine East Pakistan.

Past achievements

104. Efforts made during the past ten years to build-up and improve civil air transport have resulted in notable progress. In the field of ground aviation facilities, the networks of radio communications and air navigation aids were improved both in East and West Pakistan. The provision of a controlled airway linking Karachi and Tehran/Ankara, is nearing completion. A "Jet" runway was constructed at the Karachi International Airport; *ad-interim* arrangements for the handling of Boeing 720-B aircraft were completed at Dacca and Lahore. Projects for the provision of appropriate runways and terminal facilities at Dacca, Lahore and Rawalpindi and that for adequate terminal facilities at Karachi have been prepared. An entirely new airfield at Ishurdi (East Pakistan) has been constructed; the other small airports, almost all of which are remnants of the last war, have been extensively renovated. New airfields are under construction at Hyderabad and Panjgur (West Pakistan) and landing grounds are being improvised at D.I. Khan, Turbat and Mohenjodaro. In addition a new airport at Khulna and small civil air terminals for Peshawar and Quetta are being planned. A special civil aviation works agency has been organized to implement the various airport construction and airfield improvement schemes. A Chief Administrator of Civil Aviation in the Ministry of Defence has been appointed to control both the PIA and the CAD. The revenues of the Civil Aviation Department increased from Rs. 3.4 million in 1955-56 to Rs. 6.4 million in 1959-60 and to Rs. 11.0 million in 1963-64.

105. The Pakistan International Airlines, organized in 1954-55, gradually built up its equipment and expanded its domestic as well as international network. During 1960-65 three Boeing 720-B, five Fokker F-27 aircraft and three S-61-N helicopters have been acquired; and three Tridents 1-E (to replace the Viscounts) and two additional F-27 aircraft have been ordered. Scheduled airline services, which in 1960 were available only to Karachi, Quetta, Lahore, Rawalpindi and Peshawar in West Pakistan and to Dacca, Jessore, Chittagong and Cox's Bazar in East Pakistan, have since been extended to Multan, Lyallpur, Gilgit, Skardu, Chitral and Mangla in West Pakistan and to Ishurdi, Comilla and Sylhet in East Pakistan. Scheduled air service frequencies on most PIA routes have been increased. Helicopter services have been introduced in East Pakistan and 16 of the 20 planned locations have so far been linked by helicopter, namely Dacca with Khulna, Raj-

shahi, Faridpur, Chandpur, Barisal, Hatia, Sandwip, Sirajganj, Bogra, Kushtia, Dinajpur, Rangpur, Bhola, Begumgunj and Chittagong. The frequencies on the Karachi-London International route have been increased and a new service to China has been opened.

106. PIA capacity ton miles increased from 15.3 million in 1955-56 to about 44 million in 1959-60 and to about 101 million in 1963-64. Correspondingly, revenue ton miles increased from 8.1 million to nearly 27 million and to about 66 million resulting in improved overall load factors. The number of revenue passengers carried increased from 109,700 in 1955-56 to 240,000 in 1959-60 and to 712,000 in 1963-64, while cargo carried increased from 1,600 tons to 11,000 tons and to 21,000 tons respectively. Operating revenues increased from about Rs. 21 million in 1955-56 to about Rs. 81 million in 1959-60 and to Rs. 213 million in 1963-64. PIA scheduled services traffic pattern over the past five years is indicated in Table XI.

Programme under Third Plan

107. (*a*) Past and current economic developments in Pakistan and increased domestic, interzonal and international movements have resulted in a sustained growth of both air passenger and air cargo traffic. This upward trend is likely to continue during the Third Plan period.

(*b*) The Civil Aviation agency is forging a viable air transport system with promising prospects. The need for further development of the system to provide increased and high speed mobility throughout the country still persists and bigger efforts are needed to improve and enhance the scope of the activity, particularly on the domestic front. The aim will continue to be to provide and to further develop safe, economical and well co-ordinated air services. In this context an applied research institute is proposed to be set up to look into the problems of sub-sonic and super-sonic civil aviation and aero-space industry, particularly from the point of view of delineating the strategy and formulating the programmes for the assembly/manufacture of civil aircraft, other equipment and supplies. A perspective plan for the enlargement of the airline coverage on a systematic and long term basis and for the development of the required aviation facilities is under preparation.

(*c*) Urgent action is necessary to improve and expand the existing airports and other aviation facilities and to evolve economical methods of airport construction, to build up the indigenous capabilities and to provide the required equipment for the construction of appropriate kinds of airport facilities particularly for the larger airports.

(*d*) PIA will continue to be responsible for the operation of domestic trunk and feeder air routes as well as international services. The airlines will be called upon to provide additional capacity particularly on the interwing and domestic trunk routes and for the expeditious movement of mail under the "Night Air Mail

Scheme." Direct services between Karachi and Chittagong and between Dacca and Rawalpindi will have to be organized. To extend the benefit of air transport to all principal population centres and to central points in the most remote and otherwise inaccessible areas, it will be necessary to organize local area/feeder services under the overall management of PIA. Such services will be generally organized on economic considerations, but some of the local airline services may not be found financially justifiable initially on purely commercial considerations and it may be necessary to subsidize such services, in the light of indirect benefits to the country, until they become self-supporting. The Government subsidy towards interwing passenger fare will be continued during the Third Plan period.

(*e*) Co-operation with Indonesia and with Iran and Turkey in the field of regional and international services is under study at the moment.

(*f*) The existing international services will be consolidated. Some additional services will be required, particularly in connection with RCD.

(*g*) It has been estimated that PIA will need an overall capacity of some 280 million ton-miles by 1970. The domestic traffic is likely to be more than doubled and substantial additions are expected on the international routes.

108. (*i*) Under the programme of the Civil Aviation Department a number of small-scale ongoing schemes and large-scale improvements planned in the Second Plan period for Dacca, Lahore, Rawalpindi and Karachi will be implemented in the Third Plan period. Improvements are also necessary at Chittagong, Multan and Lyallpur. An entirely new airport is needed at Khulna in East Pakistan. Night landing facilities will have to be provided at some more of the airports for greater frequency of operation as well as for the "Night Air Mail Scheme", leading to more intensive utilization of the fleet and facilities. Other possible measures should also be taken to ensure maximum benefits from the existing facilities and from each unit of investment to be made. For the newly emerging points on the expanding air network purely utility type landing grounds and other simplified facilities will be provided initially and construction of more elaborate arrangements will follow traffic build up. Local help like that obtained for the heliports in East Pakistan will be sought. For economy, joint use of facilities as between the PAF and CAD for the operation of one and the same airport, when possible, will be encouraged. Particular attention will be paid to orderly traffic handling and to income producing activities. The development of the flying clubs will continue to be supported.

(*ii*) The programme of the Pakistan International Airlines provides for the payment of principal due on equipment already received or on order, for the acquisition of one Trident, five Fokker Friendship and one Helicopter S-61-N type aircraft to augment the fleet and for PIA's contribution to the hotels project. Other items on the programme are: enlargement and improvement of cargo handling facilities both at the airports and at the PIA city terminals;

acquisition of four Boeing 707/720-B type aircraft for PIA's international and interwing routes; and about a dozen small aircraft and other equipment for the local/feeder air services.

(*iii*) Emphasis will continue to be placed on the training programmes in all aspects of civil air transport industry and on the provision of adequate maintenance facilities for the equipment in use. Rapid changes in techniques and equipment make it all the more necessary.

(*iv*) The allocation to civil aviation may need modification later in the light of further studies and possible changes in equipment.

POSTAL SERVICES

109. Postal services are being steadily expanded and improved in line with the increasing literacy and rapid industrial and commercial development.

Progress under Second Plan

110. The number of post offices will have increased from 10,261 in 1960 to about 11,800 in 1965, the achievement being 1,500 new post offices against the Second Plan target of 1,300. All letter mail is now air-lifted to the extent practicable. Postal traffic is increasing—unregistered mail increased from 601 million articles in 1959-60 to 789 million in 1963-64. The number of inter-wing postal air parcels have increased from 63 thousand in 1959-60 to 191 thousand in 1963-64, the poundage having increased from 192 thousand to 976 thousand correspondingly. Postal revenues have increased from Rs. 55 million in 1959-60 to Rs. 79 million in 1963-64.

Special services like Postal Savings and Postal Life Insurance have made considerable progress; net collections under the postal savings have amounted to Rs. 409 million during the past five years, the number of Postal Life Insurance Policies having increased from 68,500 in 1959-60 to about 107,000 in May, 1965 and the sum assured from Rs. 188 million to Rs. 342 million. Proposals to reinforce the incentives for small savings and to introduce group insurance are under study.

Programme under Third Plan

111. (*a*) There is an increasing demand from villages, especially from the Union Councils for the provision of additional postal facilities. Therefore, 2,000 new post offices, mostly in the rural areas, are proposed under the Third Plan; the aim being to provide a post office for each village with a population of 1,500 or more.

(*b*) The expanding services necessitate reconstruction of old and construction of new post office buildings. The post office owns over a thousand office buildings, several of which are 50 to 60 years old and over 100 are in urgent need of renovation or extension or both. Buildings suitable for postal operations are ordinarily not available for renting in the growing urban areas and the rentals are, in any case, mostly prohibitive. The construction of some 150 new small post office buildings is needed urgently.

(*c*) A joint post office—civil aviation scheme for "Night Air Mail" together with the reorganization of the air mail collection, sorting and despatch arrangements to speed up operations particularly for the exchange of all kinds of mail between the major commercial, industrial and administrative centres both in East Pakistan and West Pakistan is under study.

(*d*) Other requirements are: limited mechanization in the larger post offices to deal with peak traffic; delivery vans for the expeditious surface movement of air and other express mail and for the prompt disposal of foreign money orders; practical training in postal operations and the provision of staff quarters and other amenities on a larger scale.

TELEGRAPHS AND TELEPHONES

112. The rapidly increasing commercial and industrial activities, the rising trend towards urbanization and higher incomes are producing a rapidly growing demand for modern tele-communication services both in respect of local telephone connections and trunk calls.

Progress under Second Plan

113. The Second Plan tele-communication development programme is making rapid progress. The number of telephones will have increased from 75,700 in June, 1960 to about 1,35,000 by June, 1965. Laying of co-axial cables between Karachi-Lahore/Rawalpindi in West Pakistan, installing of VHF systems in East Pakistan and the construction of a microwave link between Karachi-Tehran and Ankara will have been completed by 1965. The planned expansion of the present HF inter-wing facilities, the putting up of a micro-wave link between Chittagong-Dacca-Khulna, and construction of communication facilities in the country-side, particularly in the coastal areas of East Pakistan, will have made some progress. The scheme for the extension of telephone service to the Thana Headquarters in East Pakistan will be nearing completion. Subscribers Trunk Dialling (STD) has already been introduced on a limited point-to-point basis between Karachi-Hyderabad, Lahore-Lyallpur/Sargodha, Lahore-Rawalpindi, Lahore-Multan and between Chittagong-Dacca and about half a dozen of such additional installations including those between Karachi-Lahore and Dacca-Khulna are in hand. Telex service is now available at Karachi, Dacca and Lahore with international connection from Karachi. Improved circuits have been provided lately between Quetta and Khandahr (Afghanistan). A 20-year long-term survey aided by U.N.S.F./I.B.R.D. to determine the overall telecommunication requirements is expected to commence shortly.

114. The Second Plan provided Rs. 338 million for telegraphs and telephones but about Rs. 442 million will have been expended during 1960-65. Against the Plan target of 45,700 telephones, some 59,300 new ones will have been added. The trunk call traffic is rising fast, almost doubling itself in every five years. Effective inland trunk calls increased from 5.24 million in 1959-60 to 8.96 million in 1963-64. The number of telegrams has increased from 4.72 million to 5.50 million correspondingly. The number of daily inter-wing trunk calls has increased 13 fold over the period 1950-51 to 1963-64. The increases would have been greater, had satisfactory channels been available. The revenues of the telegraphs and telephones department have increased from Rs. 83.0 million in 1959-60 to Rs. 136 million in 1963-64.

Programme under Third Plan

115. (*a*) The development of telecommunication services is being undertaken as a continuous programme. Some 35,000 uncomplied applications for telephones are likely to be carried forward to the Third Plan as against 24,000 brought forward to the Second Plan. Schemes worth about Rs. 303 million are likely to be brought forward to the Third Plan. Assuming an income (industrial) elasticity of demand for telephones at 1.75 the estimated requirement of additional telephones during 1965-70 is about 1,65,000. The Third Plan proposes the installation of some 1,50,000, possibly about 1,25,000 in the urban areas and 25,000 in rural areas. Of these a substantial number (some 30,000) may be connected as extensions or through the private branch exchanges.

(*b*) Further improvement of the presently inadequate and poor quality inter-wing telecommunications is imperative and high priority is being given to this task. To this end, the following measures are under study and will be adopted within the available resources:—

(*i*) consolidation of the existing HF circuits;

(*ii*) a microwave scatter communication system via Nepal;

(*iii*) a sub-marine cable between Karachi and Chittagong; and

(*iv*) participation in the international programme for satellite communications.

(*c*) To handle satisfactorily the increasing inland trunk call traffic within both the provinces substantial additions to the inland trunk telephone network will be required. It is proposed to develop extensive and dependable micro-wave radio relay net works in both East and West Pakistan and to extend the Karachi-Tehran micro-wave link to Rawalpindi/Lahore; to provide new micro-wave links between Lahore-Rawalpindi and between Chittagong-Barisal-Khulna; to lay a co-axial cable between Rawalpindi-Peshawar in West Pakistan as well as between Dacca-Chittagong in East Pakistan (subject to the provision of road bridges across the intervening unbridged rivers); and to provide additional channelling equipment on some of the sections of the existing co-axial cable system between Karachi-Lahore/Rawalpindi and in the micro-wave link between Chittagong-Dacca-Khulna. For secondary sections, construction of minimum additional overhead lines, installation of some more carrier telephone and VFT systems and a limited expansion of the trunk exchanges is proposed. Subscriber trunk dialling will be made available within each province between major (above 2,000 lines) automatic telephone exchanges. The overhead telegraph lines along the rail-road where electric traction is proposed, such as between Lahore-Khanewal, will have to be replaced by underground cables. Special efforts will be directed towards the further extension of the telephone and telegraph facilities to the rural areas, particularly to those areas, where at present even the elementary facilities either do not exist at all or have not progressed beyond the 19th century stage. Leased circuits will be provided for the airlines and the meteorological services and other departments and agencies. "Telex" service will be extended to a few more important centres in both East and West Pakistan. Circuits between Peshawar and Kabul as well as those between Chittagong and Rangoon will be improved. To speed up the disposal of telegrams, to improve fidelity and to prevent errors and delays occurring in manual handling, "Gentex" will be introduced in both East and West Pakistan. It is anticipated that some 23 million trunk calls (of 3 minutes duration) will have to be effectively handled in 1969-70.

(*d*) Investigations for the development and utilization of a suitable electronic switching system for automatic telephone exchanges and applied research in other relevant matters will be conducted.

(*e*) To cater to the increasing needs for skilled personnel, the presently modest training programmes will be suitably augmented.

(*f*) Other projects are: streamlining of stores organization, limited mechanization in the accounts office, augmentation of repair shops, adequate office and housing accommodation and staff amenities on a larger scale.

(*g*) The allocation for telegraph and telephone services may need revision in the light of the long-term survey reports.

Telephone Factories

116. To meet the requirements of the Third Plan the telecommunication equipment manufacturing facilities will have to be considerably expanded. The Haripur telephone factory, which has already been expanded from 5,000 exchange lines per annum in 1955 to 15,000 lines in 1965, will be further expanded to 30,000 lines per annum. An entirely new telephone exchange equipment factory, incorporating improved technology, and a telephone cable factory are to be set up in East Pakistan. Production facilities will also be organized for some of the electronic

components of the telecommunications equipment and for the assembly and fabrication of VHF and UHF radio relay systems and teleprinters. Production facilities for open-wire line stores will be enlarged. The institutional arrangements for this purpose will be suitably strengthened.

BROADCASTING

117. Modern means of mass communication are being developed to help create a positive response to the needs of the hour and of the future, to revolutionize the outlook towards modernization on the wide agricultural front and in the rising industrial working force and to further the ends in such matters as integrity, discipline, unity and education. Of all the mass media of communications, radio remains the most powerful in Pakistan, handicapped as the country is by low literacy and inadequate means of education and by the geographic separation of the two provinces.

Progress under Second Plan

118. The Second Plan programme for the development of broadcasting is likely to be fully implemented. By 1965, there will be full-fledged broadcasting facilities at Karachi, Hyderabad, Quetta, Lahore, Peshawar and Rawalpindi/Islamabad in West Pakistan and at Dacca, Rajshahi and Chittagong in East Pakistan in addition to relaying stations at Sylhet and Rangpur. By the end of the Second Plan period, the coverage of the primary service through the medium wave in West Pakistan will be about twenty-five per cent of the area but about forty per cent of the population. In East Pakistan the coverage will be over 90 per cent in respect of both. One 100 KW medium-wave transmitter each has been installed at Dacca and Lahore. For shortwave transmission, two 100 KW transmitters at Islamabad and one 100 KW transmitter at Dacca, presently under installation, will provide the much needed East-West Pakistan link.

The installations completed during the Second Plan period are:

I—Transmitters

Islamabad	Two	100 KW Shortwave transmitters.
	One	10 KW Shortwave transmitter.
Lahore		100 KW Mediumwave transmitter.
Quetta		10 KW Mediumwave transmitter and
		10 KW Shortwave transmitter.
Dacca		100 KW Mediumwave transmitter.
		100 KW Shortwave transmitter (under installation).
Chittagong		10 KW Mediumwave transmitter.
Rajshahi		10 KW Mediumwave transmitter.
Rangpur		10 KW Mediumwave transmitter.
Sylhet		2 KW Mediumwave transmitter.

II—Broadcasting Houses

i) Hyderabad, Quetta, Lahore, Chittagong and Rajshahi.

ii) Extensions at Rawalpindi and Dacca.

III—Receiving Centres

Karachi, Hyderabad, Peshawar, Quetta, Lahore, Dacca and Islamabad.

An experimental commercial service was introduced at Karachi in November 1961 and the response has been encouraging. The revenues of Radio Pakistan have increased from Rs. 2.2 million in 1959-60 to Rs. 5.8 million in 1963-64.

Programme under Third Plan

119. The objectives of the Third Plan will continue to be to establish a reliable mediumwave coverage for the whole of the country and to expand the present facilities in the shortwave to provide more internal secondary service, to interlink the most important cities like Karachi, Dacca and Islamabad and to project the external services effectively through stronger signals. It is proposed to extend the area coverage in West Pakistan to sixty-five per cent with a population coverage of about eighty-five per cent. It is also proposed to cover the remaining areas in East Pakistan. A full-fledged mediumwave station at Multan (100 KW) and a relaying station of 10 KW at Sukkur in West Pakistan and at Khulna in East Pakistan will be established. A 100 KW mediumwave transmitter each will be added at Quetta and Hyderabad. One 1,000 KW mediumwave transmitter will be added each at Dacca and Peshawar. Two 250 KW shortwave transmitters will be added to the set up at Islamabad to provide improved listening facilities throughout Pakistan and abroad. The broadcasting house at Islamabad, presently under construction, will be completed. A new broadcasting house will be constructed at Peshawar. It is also proposed to provide for the urgently required replacements and improvements and to augment the supporting equipment at most existing stations and for outside broadcasts. To meet the personnel requirements of the expanding services the training facilities for all categories of staff will have to be expanded and some residential accommodation for staff provided. Separate studios for transcription services at Lahore, Dacca and Karachi will be constructed. A central stores depot at Chittagong and a laboratory and workshop at Islamabad are included in the Plan.

Particular mention may be made of the proposed arrangements for the introduction of farm broadcasting, for which the transmission facilities are to be provided by Radio Pakistan and the listening sets (about 10,000) are to be distributed by the two Provincial Governments under the works programme.

120. Proposals for the extension of the commercial service to other important centres are in hand.

121. Some progress has been made in the inception of the electronics industry to help provide a large number of radio receivers. The present number of broadcast receiver licences is only about 432,255 and needs to be enlarged.

122. By 1965 the country will have at the 11 transmitting stations, 26 transmitters of 760 KW power. The proposals under the Third Plan would raise the number of transmitting stations to 14, of transmitters to 36 and their power to 3680 KW.

TELEVISION

123. The development of this potent mass communication medium is being conceived in the light of the availability of technical experience and programme production talent. General service television, with a strong emphasis on the educational aspects, is proposed. Private enterprise, both foreign and local, is being associated. Full advantage will be taken of the experiences of the other countries in evolving the strategy for the expansion of television based on indigenous products in the not too distant future. Two Pilot stations, one at Lahore and the other at Dacca, have been set up to help accumulate the relevant know-how and to set the lines for the development of suitable programmes. Television training and film production facilities will have to be organized. The service, in the beginning, will be limited to the most important centres.

124. In the Third Plan period three full-fledged stations are being provided at Karachi, Lahore and Dacca with facilities for producing thirty hours of programme per week from each station. Three small stations will be put up at Islamabad, Chittagong and Peshawar with limited production facilities. To begin with, they will mostly relay programmes of the main stations supplied on tapes or films. Inter-connecting facilities will be provided gradually as relay links get developed.

125. The stations will have 5 KW transmitters, each covering an area of about 40 miles radius. Population coverage will be about ten million people each in East and West Pakistan.

126. A Central Training Institute is being set up in Islamabad to provide instructions and training in television technique and programme production.

TABLE I

Development Programme of P. W. R. under the Third Five-Year Plan

(Million Rs.)

Item No.	Particulars	Carry forward from Second Plan (on-going)	Estimated cost of the 3rd Plan projects	Total of columns 3+4	Third Plan Allocations
1	2	3	4	5	6
1.	Rolling Stock	179.4	712.8	875.3	486.1
2.	Track	19.8	440.5	453.2	258.9
3.	Bridges	26.3	24.0	57.1	44.8
4.	Plant and machinery	4.7	30.0	35.2	25.1
5.	Signalling and line capacity	27.0	150.0	164.6	157.0
6.	Workshops	52.6	62.4	119.6	113.3
7.	Engineering and structural works	28.5	293.2	309.5	135.5
8.	Introduction of Electric Traction	45.5	—	45.5	45.5
9.	Construction of new railway lines	87.3	27.3	112.4	96.8
10.	Research and Training	—	8.0	8.0	7.0
	Total:	471.1	1748.2	2180.4	1370.0

TABLE II

PAKISTAN WESTERN RAILWAY

Requirement and procurement of rolling stock units during the Third Plan period

Item	Total overage stock at the end of the Third Plan period	Total plan requirements	Delivery of stock during the Third Plan period		Total
			Against throw-forward from 2nd Plan	Against new projects of Third Plan	
1	2	3	4	5	6
Diesel-electric locomotives	—	187	20	85	138
Locomotives for electric traction	—	—	33	—	—
Steam locomotives	463	—	5	—	5
Passenger carriages	704	696	241	335	576
Other coaching vehicles	801	299	9	188	197
Wagons	4901	10000	330	4380	4710

TABLE III

Development Programme of the P.E.R. under the Third Five-Year Plan

(Million Rupees)

Item No.	Particulars	Carry for-ward from 2nd Plan	Esti-mated cost of 3rd Plan project	Total of Cols. 3+4	Third Plan Allo-cations
1	2	3	4	5	6
1.	Rolling Stock	74.7	600.0	674.7	398.7
2.	Track	9.8	150.0	159.8	84.8
3.	Bridges	5.6	33.0	38.6	18.1
4.	Plant and machinery	12.0	17.0	29.0	21.8
5.	Structural and engineering works including improved signalling and line capacity works and rehabilitation of workshop ...	79.2	280.0	359.2	207.7
6.	Construction of new railway lines ...	158.7	200.0	358.7	208.9
	Total:	340.0	1280.0	1620.0	940.0

TABLE IV

PAKISTAN EASTERN RAILWAY

Requirement and procurement of rolling stock units during the Third Plan period

		Total overage stock at the end of Third Plan	Total Plan require-ments	Delivery of stock during the Third Plan period		
				Against throw-forward from 2nd Plan	Against new projects of Third Plan	Total
1		2	3	4	5	6
Diesel-electric locomotives	B.G.	—	38	14	15	29
	M.G.	—	85	3	50	53
Steam locomotives	B.G.	96	—	—	—	—
	M.G.	140	—	—	—	—
Passenger carriages	B.G.	176	252	38	151	189
	M.G.	327	436	—	247	247
Other coaching Vehicles	B.G.	132	86	10	44	54
	M.G.	186	96	100	49	149
Wagons	B.G.	1054	850	—	500	500
	M.G.	7207	5600	196	2800	2996
Tugs		—	—	2	—	2
Barges		—	—	4	—	4
Passenger steamer		—	—	—	1	1

TABLE V

Development Programme of Roads in West Pakistan during the Third Five-Year Plan

(Million Rs.)

	Estimated cost	Third Plan Allocation
1. Ongoing projects of the Second Plan	435.0	245.0
2. Reconditioning and widening of existing black topped roads	100.0	40.0
3. New schemes	100.0	35.0
4. Superior type highways (including bridge at D.I. Khan)	947.0	412.0
5. Restoration of flood damages	50.0	20.0
6. Road Research Laboratory	10.0	2.5
7. Barrage roads	110.0	35.5
8. Roads in Frontier Regions	24.0	20.0
9. Karachi—Quetta—Zahidan Road (RCD Project)	80.0	80.0
Total:	1856.0	890.0

TABLE VI

Development Programme of Roads in East Pakistan under the Third Five-Year Plan

(Million Rupees)

	Estimated Cost	Third Plan Allocation
1. Ongoing projects of the Second Plan	950	740
2. Completion of roads started prior to First Five-Year Plan and remained unfunded in the First and Second Plans	80	40
3. Second Phase work of the existing roads	80	40
4. Upgrading the existing roads and bridges	45	45
5. Bridges on unbridged gaps	85	45
6. Roads in cyclone affected areas	40	20
7. Other roads and roads of strategic importance	300	90
8. Bridges over Buriganga and Karnaphuli rivers and feasibility study of bridging the other major rivers	110	40
9. Workshops, tools and plants and other miscellaneous works	70	40
Total:	1760	1100

TABLE VII

Commercial Motor Vehicles in Service

(In thousands)

	1959-60	1964-65 (projected)	Of which over 10 years old (estimated)		Procurement during Third Plan
			Number	Percentage	
	1	2	3	4	5
East Pakistan					
Trucks	2.95	7.90	2.2	28	9.50
Buses	2.06	3.20	1.4	44	4.00
Total:	5.01	11.10	3.6	32	13.50
West Pakistan					
Trucks	17.35	27.00	8.4	31	10.50
Buses	8.78	14.00	4.7	34	6.50
Total:	26.13	41.00	13.1	32	17.00
All Pakistan					
Trucks	20.30	34.90	10.6	30	20.00
Buses	10.84	17.20	6.1	35	10.50
Total:	31.14	52.10	16.7	32	30.50

TABLE VIII

Development Programme of Inland Water Transport under the Third Five-Year Plan

(Million Rupees)

Items	Estimated cost	Third Plan Allocation
1	2	3
I. PUBLIC SECTOR		
A. Ongoing Projects		
Carry over from the 2nd Plan	—	46.5
B. New Schemes		
Development of Ports		
1. 5 major ports (2nd Phase)	143.1	85.0
2. Secondary ports	51.5	20.0
3. Launch landing stations	20.0	16.0
4. Development of ports in coastal islands (Phase II)	6.0	4.0
	220.6	125.0
Development of Waterways		
1. Development of waterways	139.1	76.0
2. Acquisition of dredgers	42.4	31.0
	181.5	107.0
Aids to Navigations		
1. Buoying, Lighting, etc.	15.0	15.0
2. Buoy tender vessel	3.5	3.5
	18.5	18.5
Experimental Development		
1. Training centre for Masters and Sukanis	3.0	3.0
2. Mechanisation of rural water transport	4.0	4.0
3. Research centre for the development in the field of craft design and motive power	1.5	1.5
	8.5	8.5
I.W.T.A. Office Building	2.0	2.0
Consulting Services	2.5	2.5
Sub-Total:	433.6	263.5
Total:	—	310.0
II. PRIVATE SECTOR:		
Augmentation, modernisation and replacement of IWT fleet; construction and expansion of dry docks and slipways and East Pakistan Shipping Corporation		655.0
Total: (public and private sectors)		965.0

TABLE IX

Development Programme of the Karachi Port under the Third Five-Year Plan

Million Rs.

Items	Estimated cost	Third Plan Allocation
1	2	3
A. Ongoing Projects		
1. Reconstruction of berths 1-4 at East Wharf	65.2	63.1
2. Reconstruction of Bulk Oil Pier	11.3	5.3
3. Construction of 3 additional berths at West Wharf	74.7	69.6
4. Rehabilitation of Manora Breakwater	5.4	4.8
5. Widening and deepening of the Main Navigable Channel	18.6	15.5
6. Replacement and purchase of craft & equipment	40.9	21.1
Sub-Total:	216.1	179.4
B. New Schemes		
1. Preparation of Master Plan	1.5	1.5
2. Lighterage berths at Juna Bunder	40.0	10.0
3. Reclamation and development of New West Wharf (Phase I)	50.0	20.0
4. Reclamation and development of new Oil Berth (Phase I)	50.0	15.0
5. Civil engineering works including provision of quarters, minor reclamations, yard remodelling and reconstruction of Keamari village (Phase II)	45.0	39.4
6. Replacement and purchase of craft and equipment	34.7	34.7
Sub-Total:	221.2	120.6
Total:	437.3	300.0

TABLE X

Development Programme of the Chittagong Port under the Third Five-Year Plan

(Million Rupees)

	Estimated cost	Third Plan Allocation
(A) Ongoing projects		
(1) Rehabilitation and extension of jetties 1-6	40.0*	38.1
(2) Provision of workshop and slipway	15.0*	14.0
(3) Off-shore oil terminal	16.6	15.9
Sub-Total:	71.6	68.0
(B) New Schemes		
(1) Construction of 7 jetties (4 new and 3 replacement)	60.0	50.0
(2) Mechanical equipment for cargo handling	6.3	6.3
(3) River training works	80.0	45.0
(4) Construction of residential quarters	10.0	10.0
(5) Construction of a jetty for lighterage cargo	5.0	4.5
(6) Construction of new and rehabilitation of old sheds	20.0	16.0
(7) Replacement and purchase of craft and equipment	93.2	52.2
(8) Laying of mooring and channel buoys	3.0	3.0
(9) Scheme for mechanised coal handling ...	15.0	15.0
(10) Improvement of roads and low-lying areas within jetty premises	30.0	10.0
(11) Other unspecified items	20.0	20.0
Sub-Total:	342.5	232.0
Total:	414.1	300.0

* Revised Estimates under preparation.

TABLE XI

Pakistan International Airlines

Scheduled services traffic, 1960-64

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64	Percentage increase Col. 6/ Col. 2
1	2	3	4	5	6	7
Passengers (No.)						
(*a*) Feeder lines	105,576	148,745	273,671	350,008	422,972	306
(*b*) Inter-wing routes:						
(*i*) First class	8,852	10,415	10,223	11,461	13,305	50
(*ii*) Tourist class	59,524	72,367	85,183	98,621	126,614	113
(*c*) International service						
(*i*) First class	5,199	4,420	8,737	8,285	7,854	51
(*ii*) Tourist class	47,284	71,526	95,350	95,208	107,917	128
	226,435				678,662	
Cargo (Tons)						
(*a*) Feeder lines	1,705	1,616	2,470	3,582	3,955	132
(*b*) Inter-wing routes	5,263	6,195	6,873	8,479	9,926	89
(*c*) International service	952	1,107	1,559	1,515	1,569	64
	6,920				15,450	

N.B.—Non-Schedule traffic is not included.

Source;—P.I.A.

ANNEXURE 'A'

TRANSPORT AND COMMUNICATIONS

Transport and Communications Development Programme—1965-70

(Million Rupees)

	East Pakistan	West Pakistan	Centre	Total
Public Sector				
1. Railways	940	1370	—	2310
2. Roads	1100	890	70	2060
3. Road Transport	50	—	—	50
4. Inland Water Transport	310	—	—	310
5. Ports:				
Chalna	—	—	210	220
Mekran	—	—	10	
6. Shipping				25.5
Mercantile Marine Academy, training centre and aids to Navigation	—	—	10.5	
N.S. Corporation	—	—	15	
7. Tourism	—	—	30	30
8. Civil Aviation	—	—	380	380
9. Post Offices	—	—	80	80
10. Telegraphs & Telephones	—	—	890	890
11. Telephone factories	—	—	90	90
12. Broadcasting	—	—	90	90
13. Television Corporation	—	—	15	15
Total Public Sector:	2400	2260	1890.5* (1,800)	6550.5 (6,460)
Private Sector				
1. Road Transport				
Corporation	23	135	—	1555
Private	577	820	—	
2. Inland Water Transport including E.P.S.C.	655	—	—	655
3. Port Trusts				
Karachi	—	—	300	600
Chittagong	—	—	300	
4. Shipping				
Corporation	—	—	345	485
Private	—	—	140	
5. Tourism	—	—	220	220
6. Pakistan International Airlines Corporation	—	—	345	345
7. Television Corporation	—	—	40	40
Total Private Sector:	1255	955	1690	3900
Grand Total:	3655	3215	3580.5	10,450.5

*Against this an allocation of Rs. 1,800 million is being made in the Plan. It should be possible to accommodate the entire programme through readjustments in intra-sectoral and inter-sectoral allocations during the course of implementation of the Plan.

TRANSPORT AND COMMUNICATIONS

Regional Breakdown of Private Sector

(Million Rupees)

	East Pakistan	West Pakistan	Total
vincial allocation			
Road transport	600	955	1555
Inland water transport	655	—	655
tral allocation			
Ports	300	300	600
Shipping	245	240	485
Tourism	110	110	220
P.I.A.	170	175	345
Television	20	20	40
Total:	2100	1800	3900

TRANSPORT AND COMMUNICATIONS

Selected Physical Targets of the Third Five-Year Plan

ALL PAKISTAN

Sl. No.	Description	Unit	Bench Mark 1964-65	Third Plan Targets	Position by 1969-70	Net increase by 1969-7
1	2	3	4	5	6	7
1.	**Railways**					
	Locomotives (Steam)	Number	1,045	—	880	(—)165
	Locomotives (Diesel electric/ Electric).	,,	418	*220	638	220
	Passenger carriages	,,	3,461	*1,012	3,872	411
	Other coaching vehicles		1,901	*400	2,049	148
	Wagons	,,	56,787	8,206*	62,267	5,480
2.	**High-type Roads**	Miles	13,300	2,400@	15,700	2,400
3.	**Road Transport**					
	Buses	Number	17,200	10,500	23,950	6,750
	Trucks	,,	34,900	20,000	48,500	13,600
4.	**Telegraphs and Telephones**					
	Telephones	Thousand Number	135	150	285	150
5.	**Post Offices**					
	Post Offices	Number	11,800	2,000	13,800	2,00
6.	**Ships**	,,	52	60*	98	4

*Inclusive of deliveries expected in the Third Plan against orders placed in the Second Pl period.

@This does not include roads to be constructed under the Works Programme.

ANNEXURE 'D'

TRANSPORT AND COMMUNICATIONS

Selected Physical Targets of the Third Five-Year Plan

WEST PAKISTAN

Sl. No.	Description	Unit	Bench Mark 1964-65	Third Plan Targets	Position by 1969-70	Net increase by 1969-70
1	2	3	4	5	6	7
1.	Railways					
	Locomotives (Steam)	Number	695	—	590	(—)105
	Locomotives (Diesel electric/Electric).	”	316	138*	454	138
	Passenger carriages	”	2,161	576*	2,372	211
	Other coaching vehicles	”	1,265	197*	1,353	88
	Wagons	”	37,333	4,710*	40,767	3,434
2.	High-type Roads	Miles	11,400	1,350**	12,750	1,350
3.	Road Transport					
	Buses	Number	14,000	6,500	18,150	4,150†
	Trucks	”	27,000	10,500	33,300	6,300†
4.	Telegraphs and Telephones					
	Telephones	Thousand Number	105	90	195	90
5.	Post offices					
	Post Offices	Number	6,600	1,000	7,600	1,000

*Inclusive of deliveries expected in the Third Plan against orders placed in the Second Plan period.

**This does not include roads to be constructed under the Works Programme.

†On the basis of 50 per cent replacement of overage vehicles.

ANNEXURE 'E'

TRANSPORT & COMMUNICATIONS

Selected Physical Targets of the Third Five-Year Plan

EAST PAKISTAN

Sl. No.	Description	Unit	Bench Mark 1964-65	Third Plan Targets	Position by 1969-70	Net increase by 1969-70
1	2	3	4	5	6	7
1.	**Railways**					
	Locomotives (Steam)	Number	350	—	290	(—)60
	Locomotives (Diesel electric)	,,	102	82*	184	82
	Passenger carriages	,,	1,300	436*	1,500	200
	Other coaching vehicles	,,	636	203*	696	60
	Wagons	,,	19,454	3,496*	21,500	2,046
2.	**High-type Roads**	Miles	1,900	1,050**	2,950	1,050
3.	**Road Transport**					
	Buses	Number	3,200	4,000	5,800	2,600†
	Trucks	,,	7,900	9,500	15,200	7,300†
4.	**Telegraphs & Telephones**					
	Telephones	Thousand Number	30	60	90	60
5.	**Post Offices**					
	Post Offices	Number	5,200	1,000	6,200	1,000

*Inclusive of deliveries expected in the Third Plan against orders placed in the Second Plan period.

**This does not include roads to be constructed under the Works Programme.

†On the basis of 100 per cent replacement of overage vehicles.

CHAPTER XIX

PHYSICAL PLANNING AND HOUSING*

With slums in the cities and depressed living conditions in the villages Housing is a perennial problem in underdeveloped countries. In the Indo-Pak sub-continent urban housing first came to the fore-front during the Second World War as a result of rapid urbanization. In Pakistan, the enormous mass of refugees seeking shelter in already over-crowded cities further aggravated the problem. In recent years rapid economic growth, which has drawn an ever increasing flow of people to the cities, and the high growth rate of population have created a situation which cries out for urgent remedy.

2. By the beginning of the Second Five-Year Plan there was a shortage of 600,000 urban dwelling units. Despite the addition of 150,000 new units over the last five years, this shortage has increased to nearly a million on the eve of the Third Plan. The problem is not only to provide living space to those who are without shelter and to new urban house-holds, but to create a decent and healthy environment for life, in well-knit and economically viable communities. There is need for planning the entire physical environment in which people live, work and seek outlets for social, recreational and cultural needs. This has led to the evolution of the concept of physical planning. The housing programme for the Third Plan is framed within this broad frame-work of physical planning which adds another dimension to the national planning process by focussing attention on regional and local needs and development as well as crystalising a comprehensive planning system well integrated on local, regional and national levels. While this may imply a longer time-horizon over which the ideal of adequate housing for each family is to be achieved, it would ensure that housing accommodation would be available in healthy and happily integrated communities and would avoid many of the tensions of urban life. The new approach also views the problem in a broader perspective paying attention to the reorganization of villages to make them healthier and happier units of national life.

3. For the approach to be effective, a systematic and viable programme of regional planning and development will have to be initiated. Except for overall policy control and co-ordination, however, it is intended to stimulate local administrations and authorities for regional and local development, and to delegate to them the necessary powers to implement the programme. The new institution of Basic Democracies will be fully integrated in this approach, and the Plan provides for a more extensive and intensive utilization of the potentialities and resources of the people themselves for achieving regional and local objectives and targets. If feasible some funds from Works Programme will be used for rural and urban works within the framework of these regional development programmes.

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*The Chapter presents only salient and strategy, policies and programmes. Further details are given in nineteen supplementary printed volumes as studies for the Third plan.

Background

4. Pakistan has a rich history and traditions of town building and housing; witness the precise city planning in the Indus valley as well as the zenith of development and status enjoyed by the cities of Dacca and Lahore during the Moghul period. Stable and prosperous rural life also flourished side by side with this advanced urban culture. During the course of time, with political, administrative and economic changes and development, these urban and rural communities passed through various stages which caused their decay and social disintegration. By the turn of the century, some of the cities were growing rapidly and posing serious problems of overcrowding, insanitary conditions and lack of transport facilities. As the Municipalities were still in an early developmental stage, the government created separate statutory bodies called Improvement Trusts for bringing about improvements in the cities. The first Improvement Trust in areas now constituting Pakistan was established at Lahore in 1936. By December 1964, the country had 22 Improvement Trusts and 109 Municipalities. Only three of these Trusts have qualified staff for physical planning and housing, while the rest of the Trusts and all Municipalities have no staff for physical planning and housing work, and hardly a few of them have qualified engineers and other essential personnel.

5. Since Independence, Pakistan has undertaken an ambitious programme of economic development in which industrialization figures prominently. As a result of concomitant urbanization and natural growth of population, the old urban communities face new problems. These urban communities were not designed and were not prepared for the special needs and demands created by rapid economic growth. There is now an urgency attaching to the efforts towards better city planning and improvement of conditions in cities.

6. The area of local government in Pakistan is still in a developmental stage. Improvement Trusts or Development Authorities rarely undertake systematic planning; at best, they carry out systematic execution of schemes. Perhaps this is because of the view of their own functions as prescribed in their charters. Their present functions are generally limited to the acquisition, clearance and improvement of land. The insistance of the government that they should be self-financing, limits their capacity to cater for the needs of the urban communities in a comprehensive manner. It is urgent that the whole sphere of local planning and development should be carefully reviewed and steps taken to recondition or change the administrative machinery for more effective work and rational planning. The Trusts and Authorities should be properly integrated with the municipal government and should be given complete responsibility for planning and development of the metropolitan and other urban areas.

7. The country at present faces serious problems in the area of physical planning and housing. The bulk of the population is poor and cannot afford to own or rent minimum essential shelter or afford minimum amenities. In rural areas, there are problems of fundamental needs like pure water supply, drainage and sanitation as well as community services and roads. Very few villages have good water supply systems, surface drainage and proper sanitation facilities. In most cases, surface water and refuse run along unpaved mud paths into open pits. In some villages drinking water is drawn from wells which are far from sanitary; in others where ground water is brackish or saline, the villagers drink turbid and polluted canal water. Where there are no canals, rain water is collected in earthen ponds and is shared equally by animals and humans. In East Pakistan, due to the spreading out of rural population in small clusters of less than 400 persons, the problem assumes a more complex dimension. In addition to the problems of water supply, there are those of drainage and excreta disposal. All these difficulties result in poor health of the rural population, a large part of which is suffering from various types of diarrhoea, dysentery, intestinal worms and other related sicknesses and ailments. A sample survey of 87 villages revealed that out of 877 persons examined, 424 were suffering from worms. Due to absence of latrines in the houses, a substantial part of the rural population is suffering from hookworms. In addition to these problems, most villages do not have roads for internal use as well as for connection to the main highways, marketing centres and centres of education and administration. As regards rural housing, the problems are more of a qualitative than quantitative nature. Most of the houses are of a poor standard, sometimes housing animals and human beings under the same roof. In many cases, bathing and toilet facilities are non-existent. These few illustrations, give some idea of the living conditions and problems of rural areas.

8. According to the 1961 Census, there are 391 urban areas and approximately 100,000 villages in the country. The Census, however, uses a wide definition of urban area and includes in it small marketing centres and townships which retain their rural characteristics. For our purposes we have defined urban areas as cities and towns which have a minimum population of 25,000. This appears to be the minimum size of a place when it starts assuming proper urban character while facing problems peculiar to urban areas.

9. Urban areas, according to the above definition, have increased from 56 to 76. The largest addition has taken place to the group of cities having population range of 25,000—49,999, where the number rose from 36 to 45. The number of cities having population of 50,000 to 99,999 and those having population of 100,000 and above rose by 6 and 5 respectively. Thus apart from the growth of existing cities which results in congestion and overcrowding, there is a rapid increase in areas which face typically urban problems. This adds a new aspect to the problem of urbanization.

10. Urban population is estimated to have increased at the rate of 5.5 per cent per annum during the last five years which is more than double the overall rate of population increase in the country. As may be seen from the following Table, the rate of urbanization is expected to show a further increase during the Third Plan period:

National Estimates of Urban Population
1960-70

Year	Total urban population	Urban Population as % of total population	Annual rate of urbanization (compound)	Percentage urban growth during the decade
1960	12,610,000	12.75%	5.5%	72.9%
1965	16,480,000	14.65%	5.8%	
1970	21,800,000	17%		

11. The urban population is thus expected to rise by roughly three quarters over the full decade of sixties. At the beginning of this period, the country had a total stock of urban dwelling units (including non-residential premises used for residence) of the rough order of 2.2 million. A dwelling unit or a house as described here means a structurally separate set of living premises with an entrance from outside the building or from a common hallway or courtyard or staircase. Main criterion is of separateness and independence, but it includes temporary and dangerously dilapidated structures as well as shacks built by lower-income groups in slums. Thus there was probably also certain element of over-estimation due to the rather vague definition used in the Census. However, since in view of the poverty of the people and paucity of resources available at the national level, attention is focussed on quantity rather than the quality of housing, distinction is made between dwelling units which can be salvaged and made fit for proper habitation and those which are to be totally discarded. The total habitable stock, on this basis, is estimated at 1.6 million provided roughly 200,000 units were made habitable from the temporary and unsafe stock. The resulting backlog of 600,000 urban dwelling units was aggravated by the addition of a demand for half a million new units as a result of the rapid increase in urban population. Since only about 150,000 housing units were constructed in the public and the private sectors during the Second Plan, the backlog increased to 950,000 units. Though the Third Plan proposes to more than double the rate of construction of new houses (292,500), the backlog of housing is expected to increase rather than decline by the end of the Third Plan.

12. For a large part of the nation, however, the problem of housing is part of the general problem of poverty. The Plan cannot aim at providing adequate housing to every family before it has effectively attacked the problem of mass poverty. Roughly 72 per cent of the urban families belong to lower income groups and cannot afford to own a house or take a modest one at an economic rent. Only part of the middle income groups constituting approximately 23 per cent of urban population and 5 per cent upper strata of the society can be catered for by the private and semi-public sectors. The lower income groups, by virtue of their desperate poverty can hardly subsist from hand to mouth, much less pay for food, clothing, education and medical expenses as well as shelter. On the other hand the public sector does not at present have resources to cater to the requirement, of this particular group in an appropriate manner. The root cause of the problem of this income group is essentially socio-economic. It is at this level that an economically feasible and socially viable solution for housing has to be found.

13. From the analysis of the pattern of living in urban areas it is clear that as yet very few families live independently in single dwelling units. Most of the families have their "in laws", relatives and non-relatives living with them. This is only partly due to the housing shortage and is largely accounted for by tradition and customs enforced by economic and sociological factors. As such, it is not so pressing to aim at providing a separate dwelling unit for each urban family at the present stage of development in our society. We may keep this as a long range objective, which may be achieved in harmonious balance with economic growth and subsequent structural changes taking place in our socio-economic pattern of life. Another vital factor to be kept in view is the fact that many of the immigrants from the rural areas coming to cities for employment do not bring their families with them. The wives and children and other dependents are left behind and partly or wholly transferred to the city in well-spaced phases over the years. This is again partly due to socio-economic causes, and only partly due to housing shortage.

14. Considering this pattern of living, it can be safely assumed that as yet it is not possible to use the concept of the "urban family" effectively for purposes of physical planning and housing. The concept of an "urban house-hold" which is based on common cooking or kitchen facility, is more relevant to our social organization and prevalent socio-economic conditions in the country. Accordingly the concept of "urban households" has been used to assess the prevalent and desirable standards, till such time that the concept of "urban family" begins to be more effective.

15. Inadequate and unplanned housing in urban areas finds its ugly manifestation in the emergence of slums. This symptom of the problem usually attracts considerable attention because of the visible human suffering. It is, however, quite easy in this case to be diverted from the objective of proper physical planning and

development of coordinated efforts towards improving the housing situation to the amelioration of the symptoms through slum-clearance. It is indeed difficult, if not impossible to have a universal definition of a slum. The concept being relative, has to be defined within a particular socio-economic frame, as a part of the overall cultural milieu. However, we may broadly define a slum, as an area where general housing and living conditions are so dilapidated, unhealthy and dangerous that the conduct and growth of normal life in a safe and healthy environment becomes difficult. It is only in the recent past that the social philosophers, physical planners and political leaders have recognized the problem as a symptom of inefficient socio-economic development and institutions, and not as a fatalistic sacrifice or state of life, which a particular segment of society must patiently endure. These socio-economic failures and inefficiencies are reflected so pathetically and dramatically in the form of slums, that the professional policy makers and executing agencies are bound to be carried away with an enthusiasm for slum clearance projects based on hasty physical analysis alone. If the process of slum formation is analysed critically and carefully, it will be found that the problem is rooted not only in physical but also in socio-economic causes, and as such, it cannot be effectively solved by a purely "public works" approach. This approach may result in wasting the scarce resources invested in the whole project on a purely temporary amelioration or in simply transplanting the slum. In order to tackle the problem properly and effectively, it is necessary to understand and attack the real causes, alongwith feasible efforts for physical improvements. However disturbing these slums may be, they serve a purpose. Groups and individuals who are not able to pay an economic rent cannot be looked after by the private housing market. Until such time as their economic condition improves, or the Government is able to devote substantial resources to subsidize their housing—both of which imply a much higher stage of economic growth—the slums will continue to serve their housing needs. Slums may arise from the erection of "jhuggies" and temporary shacks by these individuals and groups themselves, or may start with the breaking down of a housing area due to overcrowding and poor maintenance. When slums have been found and their clearance is desired it must be remembered that most of the slum families are so poor, that if each family is housed in an independent clean and healthy dwelling unit, it will not have the resources to pay even a nominal rent or to maintain the unit. And if the unit is far removed from the place of work it will only burden the family with the additional cost of transport. A programme of slum clearance without an advanced or integrated programme of economic and social development is likely to end up in creating additional problems and responsibilities for the government by increasing the dependence of the residents on public resources.

16. In the present pattern and level of urban living the majority of middle income and almost all the lower income groups are used to rather spartan space stan-

dards, and have not yet adopted the complex and rigid practices of separating cooking, dining, and living functions. In most cases all these functions are performed in pleasant informal harmony without modern rigid division of space. Therefore, it is incorrect to assess or evaluate the existing housing stock on modern rigid space division. In this context, the physical structures have no independent existence of their own. People do not live in houses only, and as such it is necessary to understand the intimate relationship between people's lives, their social, cultural and economic levels and potentialities, as well as the real capacity of the local, regional and national economies to cater effectively for radically different or luxurious standards. Using this type of realistic criteria, we can only condemn temporary and dangerous dwelling units, and cannot afford to throw away permanent and semi-permanent habitable units. Thus a slum area will need a careful classification, partial replacements or improvements and an intensive programme of general amelioration of the overall neighbourhood with special attention to drainage, excreta disposal, water supply, light and air and the provision of a few "lungs" (open spaces with trees or a little greenery or just a small open square or a small plaza) to introduce freshness and variety into the neighbourhood. Except for replacement of dangerous structures, the area in general may only require "partial surgery" and a general programme of amelioration and conservation.

17. The slums which may need complete clearance are those occupied by squatters on public land or various open spaces or on edges of an urban area. It is this type of slum with temporary shacks, jhuggies and all kinds of *ad hoc* improvised solutions, that pose some of the most serious problems for the local and the provincial governments. So far these temporary structures and jhuggies have been regarded in a somewhat negative manner, in the sense that these must be eliminated at public cost and the residents somehow housed in a cleaner environment. Such an approach not only oversimplifies the problem, but drastically curtails the opportunities for an effective exploitation of a number of vital potentialities, which though latent could be tapped. A jhuggi or a temporary shack, is a living proof and symbol of the poor resident's will power and sustained efforts (against all odds) to survive in an unsympathetic environment and to build a shelter for himself and his family, without any assistance except for forcible free acquisition of government land. This shows that:

(i) The incoming urban residents and families have the potentiality and will power to use their own modest resources and labour for building a temporary shelter for themselves.

(ii) They have the patience and the stamina to brave all kinds of difficulties, and risks involved in such a sustained venture. Any weaknesses or defects in the approach and the general construction of the temporary structures are mainly due to lack of technical guidance.

(iii) The residents of such areas develop their own community class and friendship feelings and patterns; at times, these are more important and satisfying to them than an improved, cleaner and safer dwelling.

18. Slum clearance projects stand a chance of success only if they are framed in the light of these factors. Slum clearance has to be carried out within a comprehensive approach encompassing, elimination or reduction of poverty side by side with the improvement of physical environment and living conditions. The most urgent need is to open new opportunities for work, in order to enable low income groups to participate more effectively in the economic and social life of the city. At the moment, for most of these families, life is a constant struggle for survival and an endless series of crises. Slum clearance and low income housing therefore becomes an integral part of the fight against poverty. Before taking up any slum clearance project, the whole area should be carefully surveyed for an intensive socio-economic analysis. After an appropriate classification as described earlier, efforts should be made to carry out a programme of amelioration wherever feasible, and only those structures should be destroyed which are dangerous. The displaced families should be settled in close proximity of their work places, and the settlement effort should be based on self-help methods.

19. If the objective of providing a house to each urban family is to be ultimately realized, side by side with the programme for improving the income and earning capacity of the people, it is necessary to bring down the cost of construction in the country in line with our own needs and economic potentialities. High cost of construction and land is a road block for housing development. The building costs determine the number of houses which can be produced within the available resources. At the moment the building industry is very crudely knit; it has no central forum of its own, and in many cases follows the standards and practices imported from abroad or set up by various construction agencies of the government. These standards and practices are at times outmoded and wasteful. No systematic research has been conducted for promoting the use of local materials, introduction of new materials and new uses of old materials. The arrangements for production of skilled manpower are not satisfactory, and the present efficiency and output of the tradesmen and other skilled as well as unskilled labourers is low. The departments executing construction projects are generally conservative and hesitate to take risks with untried materials and methods. Except for a few recently established firms, most of the contractors are essentially of a managerial type supplying labour, material and finance and do not work out their own designs or supply alternative economic proposals.

20. Progress of the building industry will depend upon a number of basic and related factors. Intensive research, appropriate training, standardization, review and revision of specifications and codes, partial mechanization and introduction

of light prefabrication as well as development of private consulting and contracting services deserve immediate attention.

21. As regards cost of land and space standards, the situation is even worse. Barring a few scattered instances, modern practices of efficient, economical and functional space standards have not yet been introduced. In view of the scarcity of buildable land and the need for economy it is urgent that modern economical standards be introduced. However, in order to be meaningful and effective, these will need to be adapted to the indigenous conditions of various regions of the country. Rising land values in urban areas pose a serious threat to urban planning and rational urban development. In certain cases urbanized land is kept vacant, pending a rise in the market. This speculation in urban land is causing serious problems for urban development and housing. Effective steps will need to be taken to bring this development under control.

22. Another basic problem, which needs immediate attention, is the serious shortage and under-employment of professional manpower. There are very few properly qualified architects, physical planners, municipal and public health engineers as well as sub-professional personnel like supervisors and draughtsmen. Extreme shortage of qualified architects has seriously effected the quality of the national building programmes, which with a few exceptions (mostly in the case of Islamabad), is an agglomeration of unattractive expensive structures.

23. The rural housing problem is essentially qualitative and has to be dealt with within a programme of village planning and rural works programme.

II. Progress during First and Second Plan periods

24. Although the idea of planned development originated with the formulation of the Six Year Development Programme (1951-57) the programme did not lay any significant emphasis on physical planning and housing; the portfolio of schemes and projects, hardly contained any water supply schemes. With the appointment of the Planning Board in July 1953, for preparing the First Plan, efforts were made for the first time to review the sectoral problems in some organized manner. However, the overall approach was mostly project oriented without proper coordination with other sectors. The Plan allocated Rs. 861 million in the public sector, for housing, water supply and sanitation, government offices and buildings, and for initiating schemes of town planning. However, due to various administrative and organizational difficulties in the implementation of the First Plan, achievement lagged behind the targets in the housing sector. Except for construction of government offices and buildings, public servants' housing and some housing for shelterless displaced families, there were substantial shortfalls in the programme. None of the Basic Development Projects for surveys, research, experimentation, town planning and professional education made any headway.

25. The Second Plan sought to improve upon the earlier approach, by assigning priority to the Basic Development Programme which included the organization of services for housing, preparation of development plans for urban areas, educational facilities for architecture and city planning and building research. Some progress was made in a few of these Basic Development programmes. However, due to the pressing problem of housing for displaced persons, the Second Plan also emerged essentially as a housing plan. The Plan allocated Rs. 1885 million in the government financed sector for meeting the most urgent needs of physical planning and housing. It envisaged, that including the developed residential plots which were lying vacant at the beginning of the Plan, it may provide a total stock of 300,000 residential plots, over which 300,000 low income houses may be built during 1960-65 for displaced families. Except for a very modest provision for general low-income housing and construction of houses for public servants, most of the plots and houses were meant for the shelterless displaced families. In addition provision was made for making pure drinking water and sanitation available in selected urban and rural areas. Development of comprehensive water, sewerage and drainage systems for Karachi, Dacca and Chittagong was assigned priority. A phased programme for the construction of new capitals at Islamabad and Dacca was also included, besides a modest programme for meeting the urgent needs of government offices and buildings in East and West Pakistan. Although a general programme was also chalked out for the private sector and Rs. 1525 million were allocated for meeting the needs of private house construction, the Plan did not spell out clear cut objectives, policies, programmes and incentives for attracting private entrepreneurs and capital for housing.

26. The performance of the Second Plan in respect of housing has not been very encouraging particularly in respect of construction of houses in the private sector. Some progress has however been made in laying the foundations for a more organized effort for physical planning and housing during the Third Plan period. A National Housing Census was completed and some preliminary work was done for the development of Building Research Institutes at Lahore and Dacca. Departments of Architecture were established in the Technical Universities at Lahore and Dacca and a Draft legislation for Development Control was completed. Some initial administrative reorganization for physical planning and housing services was also accomplished in both the provinces and a separate Department for Public Health Engineering was established in West Pakistan. Against an overall target of 20 Urban Development Plans for important urban centres seven plans were completed and work was taken in hand for another three.

27. Substantial progress was made with respect to rural water supply; approximately 150,000 hand-pumps and tubewells were installed in rural areas of East Pakistan, while 188 villages were served with potable water supply in West Pakistan.

Water supply, sewerage and drainage projects were completed in thirty urban areas, fifteen in each Province. Seven thousand rural latrines were installed in East Pakistan under a pilot project for rural sanitation. The serious shortfall was in the construction of new houses in urban areas; not more than 150,000 dwelling units could be constructed. Out of these, approximately 100,000 units were built by the local, provincial and central governments as nucleus and complete houses for displaced families as well as central and provincial public servants.

28. Islamabad, now a living reality, has assumed a distinct direction and personality for its destined role as the nation's Capital to serve as a focal point and embodiment of national life. Its population is well over 22,000 and rapidly growing to achieve the 50,000 target by the end of this year. A number of leading international as well as Pakistani architects have participated in planning and designing various complexes and buildings. It would be of interest to point out that even the Class IV employees *viz.*, peons and messengers have been provided with two living rooms apart from bath room, kitchen, verandah, etc. The houses are equipped with proper sanitation, water supply and gas burners. It is expected that Islamabad when completed may have a wholesome and dignified environment congenial to work and healthful living. In June 1959 the Government of Pakistan decided that a nucleus Second Capital should also be built at Dacca. The principal function of this Capital will be legislative and accordingly the National Assembly and all related functions and activities will be accommodated there. The architect has now completed a general detailed site plan, which consists of the Assembly and related buildings, and area reserved for various institutions, a public park, a residential sector for public servants' housing, and a hospital.

29. As regards, local bodies, Improvement Trusts and Development Authorities, although the financial allocations have been exceeded, the physical achievements and progress are by no means coordinated and properly planned in all cases. In the private sector construction of houses has been mostly limited to upper income groups, and standards of neighbourhood and community planning have been poor. Private sector has so far not come forward with necessary vigour and dynamism to undertake construction of houses at the speed dictated by requirements and demand even to the extent facilities were made available during the Second Plan. The number of private new houses constructed during the Second Plan is below the target and far behind the rate of development of plots for construction.

30. On the whole, the progress during the Second Plan has hardly made a den in the problem of housing. The actual physical development still lacks a well-defined coordinated approach, and urbanization is proceeding by and large in such a manner that problems are not being tackled effectively. The attached illustrations show the present patterns of population distribution and urbanization in both the provinces.

III. OBJECTIVE & PRINCIPAL POLICIES

31. The overall objective is to meet the housing needs of the people in a safe and healthy physical environment. In view of the limited resources, the immediate concern would be to maximise the effectiveness of programmes by carefully determining priorities and by giving special attention to co-ordination of work with other sectors. To achieve these objectives the following lines of approach are to be adopted during the Third Plan period:

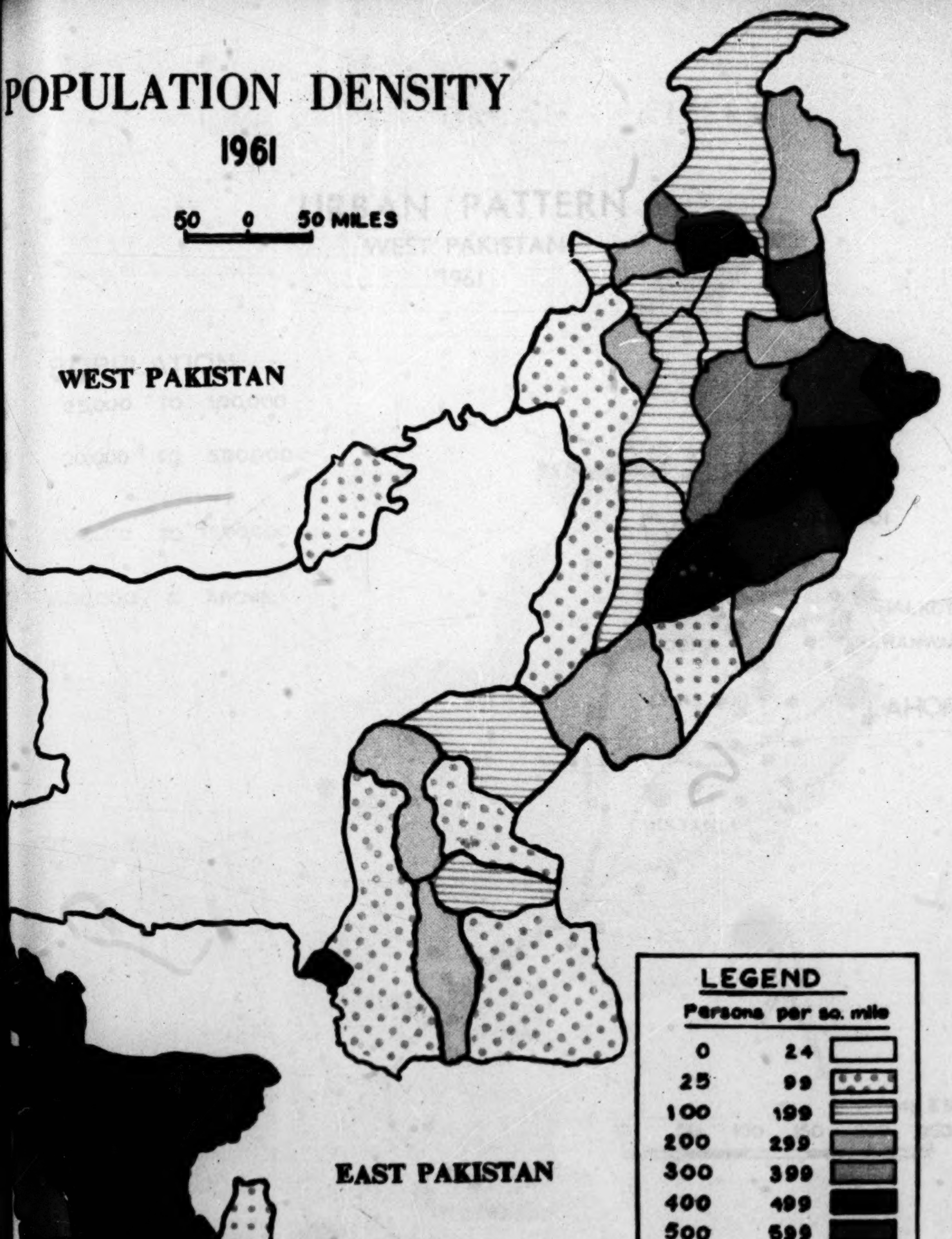
(i) In order to relate the distribution of population and facilities for living in urban and rural communities with the growth of economic activity and employment opportunities, physical planning and housing projects will be closely co-ordinated with plans and programmes of agriculture, industries, transportation and communication and water and power. A concerted effort will be made to reduce the socio-economic and technological gap between the city and the village.

(ii) Special effort will be made either to reduce the distance between the place of work and the place of living of urban workers or to reduce the travel time and costs.

(iii) Master plans for rural and urban water supply, sewerage and sanitation will be prepared for East and West Pakistan and integrated with the regional and local physical plans.

(iv) Rest and recreational areas as well as community and regional parks will be developed. To facilitate this as well as other public works programme, the present procedure for land acquisition specially in urban areas, will be examined and revised. The question of determining a maximum ceiling for urban land holdings will be examined and appropriate legislation enacted for controlling the speculative holding of urban land developed for residential construction.

(v) Under the housing programmes, it is proposed to increase the supply of urban dwelling units by 2,92,500 over the next five years. For the construction of houses, reliance is to be placed mainly on the private sector. The public sector programme aims at providing only 80,000 houses. First priority is assigned to the housing needs of slum dwellers, lower income groups and industrial workers. Self-help, mutual aid and co-operative housing methods will be promoted and developed for attacking the problem. Slum clearance programmes will only be taken up after socio-economic analysis of the particular areas. Normally the emphasis will be on amelioration by the provision of water, drainage, sanitation and small open spaces for air and light. Actual slum clearance of dangerous



POPULATION DENSITY

1961

50 0 50 MILES
WEST PAKISTAN
EAST PAKISTAN
LEGEND
Persons per sq. mile
0 24 ☐
25 99 ▨
100 199 ▨
200 299 ▨
300 399 ▨
400 499 ■
500 599 ■
600 799 ■
800 999 ■
1000 1199 ■
1200 1499 ■
1500 & above ■

g Commission
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OBJECTIVES & PRINCIPAL POLICIES

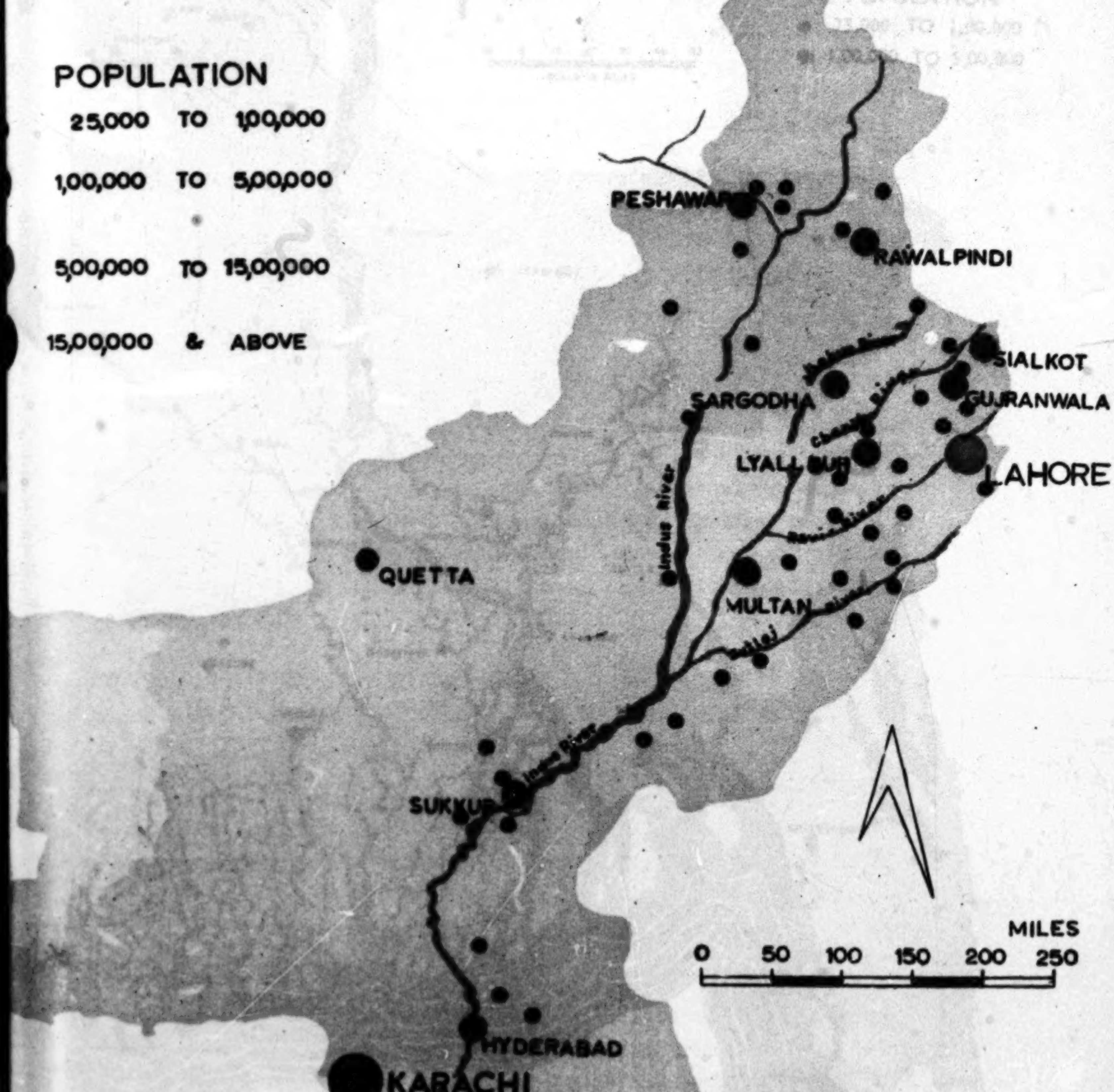
[illegible]

(b) [illegible]

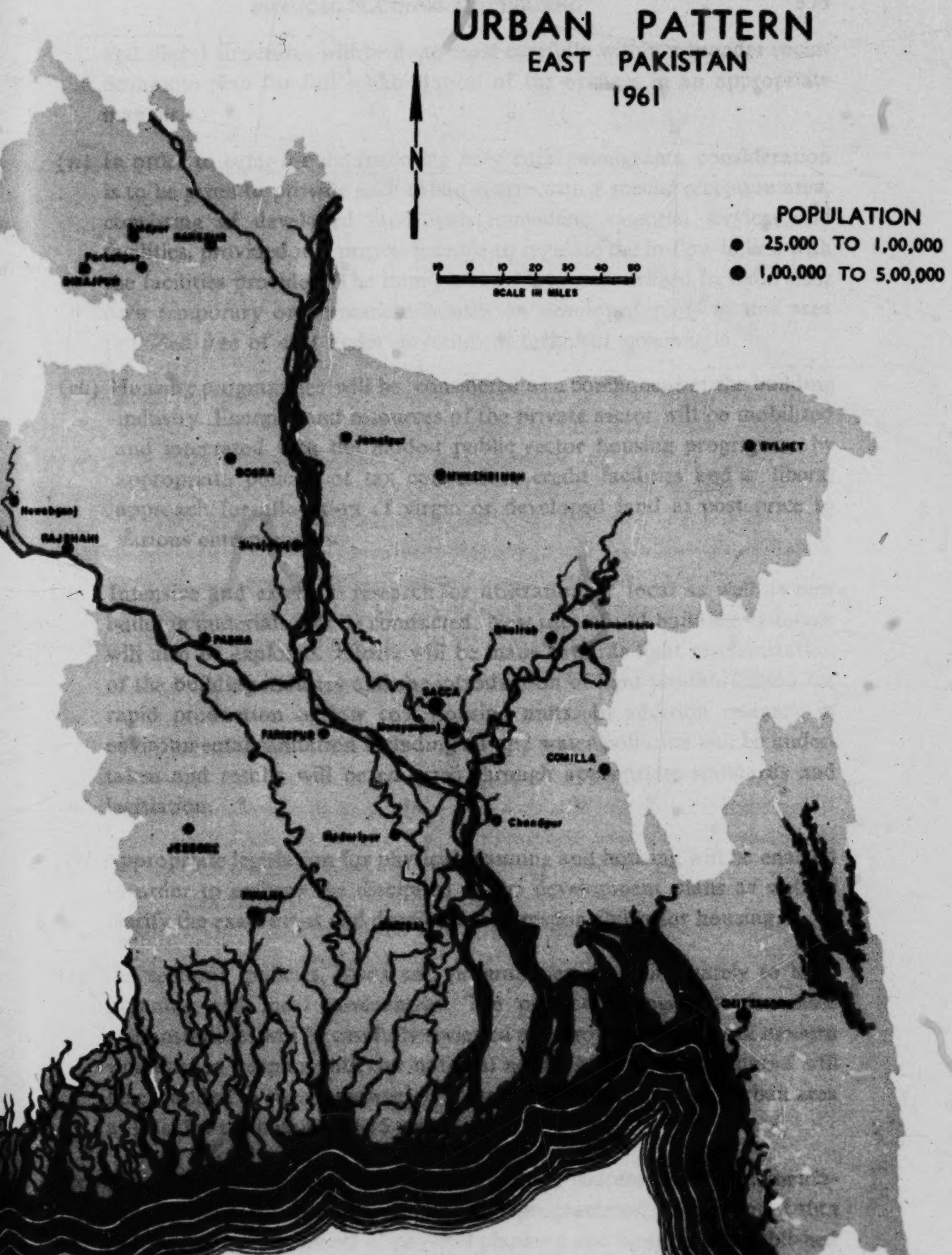
(c) [illegible]

(d) [illegible]

URBAN PATTERN
WEST PAKISTAN
1961


POPULATION
25,000 TO 1,00,000
1,00,000 TO 5,00,000
5,00,000 TO 15,00,000
15,00,000 & ABOVE
PESHAWAR
RAWALPINDI
SIALKOT
GUJRANWALA
SARGODHA
LYALLPUR
LAHORE
QUETTA
MULTAN
SUKKUR
HYDERABAD
KARACHI
Jhelum River
Chenab River
Ravi River
Sutlej
Indus River
ARABIAN SEA
MILES
0 50 100 150 200 250

Planning Commission
(Physical Planning & Housing Section)



URBAN PATTERN
EAST PAKISTAN
1961

N
10 0 10 20 30 40 50
SCALE IN MILES
POPULATION
● 25,000 TO 1,00,000
● 1,00,000 TO 5,00,000
Saidpur
RANGPUR
Parbatipur
DINAJPUR
Jamalpur
BOGRA
MYMENSINGH
SYLHET
Nawabganj
RAJSHAHI
Sirajganj
PABNA
Bhairab
Brahmanbaria
DACCA
Narayanganj
FARIDPUR
COMILLA
Chandpur
Madaripur
JESSORE
KHULNA
BARISAL
CHITTAGONG

Planning Commission
(Physical Planning & Housing Section)

and illegal structures will be done most carefully within a broader socio-economic plan for full rehabilitation of the evictees in an appropriate manner.

(*vi*) In order to cater for the incoming poor rural immigrants, consideration is to be given to provide each urban centre with a special reception area, consisting of developed land with immediate essential services and facilities, provided it is proved feasible to regulate the in-flow in line with the facilities provided. The immigrants will be encouraged to build their own temporary or permanent houses on developed plots in this area provided free of cost under government technical supervision.

(*vii*) Housing programmes will be considered as a component of the building industry. Energies and resources of the private sector will be mobilized and integrated with the modest public sector housing programme by appropriate policies of tax concession, credit facilities and a liberal approach for allocation of virgin or developed land at cost price to various entrepreneurs.

(*viii*) Intensive and extensive research for utilization of local as well as new building materials will be conducted. New uses of old building materials will also be explored. Efforts will be made towards light mechanization of the building industry and the introduction of light pre-fabrication for rapid production of low cost housing units. In addition research in environmental sanitation including air and water pollution will be undertaken and results will be enforced through appropriate standards and legislation.

(*ix*) Appropriate legislation for physical planning and housing will be enacted in order to enforce the discipline of the development plans as well as clarify the exact areas and distribution of responsibility for housing.

(*x*) The sectoral policies, plans and programmes relate intimately to local planning and local government. The present arrangements for these responsibilities will be carefully reviewed and brought in line with modern practices in keeping with our national needs. Municipal boundaries will be expanded in such a manner as to cover all of the potential urban area at least for the coming 10-15 years.

(*xi*) In order to achieve a reasonable amount of success in the implementation of the sectoral policies, plans and programmes, it is essential that independent departments of physical planning and housing be established in both the provinces. This can be done by regrouping the existing facilities and adding essential professional staff.

(*xii*) Collection of data, evaluation of needs and conditions, planning and housing surveys and a re-appraisal of building codes and specifications should receive priority.

(*xiii*) Due to paucity of resources, the programme of new government offices and buildings shoud meet only the most essential needs during the plan period according to functional, economical and sound standards and specification and strive to use local materials.

32. It may be noticed, that these policies envision important new departures, demanding bold and imaginative action, and form part of a comprehensive approach. The integrated programme emerging out of these efforts will have a substantial impact on the life of the people, improving their general health and enhancing their social and political well being. All this must be reflected in an increase in productivity. Improvement of living conditions and general social development are not an automatic consequence of economic development. Economic development reshapes physical environment and brings about physical and social changes. Unless these changes are guided into desirable and harmonious patterns of purposive growth, and unless adequate housing facilities with all related services are ensured, the result may be physical and social disorganization which damages the health and well being of the people and ultimately slows down the process of economic growth as well.

IV. THE STRATEGY

33. The acute shortage of housing in the urban areas and deplorably depressed living conditions in the villages are symptoms of the general and broad problem of poverty in the country. A large majority of the people belong to low income groups and cannot afford to own or rent minimum essential shelter. The nation as a whole is too poor to devote necessary resources for the purpose of both improving the standards of housing, water supply and sanitation throughout the country and increasing the supply of new urban dwelling units at the speed at which urban population is growing. Not only is there a choice involved in allocating financial resources at the disposal of the government between physical and social infra-structure of which housing is one component and the expansion of other sectors; the country lacks some of the physical and technical resources necessary for such a gigantic effort. The strategy must, therefore, be to try and achieve a blend of policies designed to ameliorate the immediate hardship where it is acute and simultaneously lay the foundations of a long-range approach which would ensure more rapid growth of facilities in future on sound lines.

34. The Third Plan aims at providing the most essential needs of housing and services within a system of priorities by an integrated programme in the public and private sector and at laying down the foundations of a rational programme for

guiding the future urban and rural development along sound lines mainly by adopting certain preventive measures.

35. In rural areas the short range and long range approaches will need to be formulated within the Works programme. Special training programmes will be developed at the Academies for Rural Development, so that village planning and rural housing projects can be successfully launched.

36. Co-operative housing and other forms of self-help and mutual aid housing will be encouraged and developed. Co-operative Housing societies will be given technical assistance and advice. The extension of the co-operative principle to middle and low income housing will be a particular objective to be attained by creating appropriate institutions at the Provincial level.

37. Aided self-help and Mutual Aid housing are based on two types of labour arrangements. Self-help is essentially an individualistic undertaking by a person with the help of his family, relatives or friends with technical and/or financial assistance from the government. Mutual Aid housing is a more formal arrangement of a collective nature, usually characterised by equal labour contribution and identical end product. These are the cheapest ways of building houses. When developed land and construction materials are made available at a low cost, together with technical assistance, these programmes can achieve substantial results.

38. In order to launch the programme properly, the provincial governments will need to have an appropriate unit for it in the Basic Democracies and Local Government Departments. This unit will initiate the programme which will not only deal with new construction, but also tackle the problem of extension or renovation of old or existing houses. A campaign will be launched against unsafe and unhealthy housing and people will be taught how to improve or alter their housing conditions by their own labour. Local materials will be used in most cases and the use of foreign materials kept to the minimum. In case the house-owners have difficulty in obtaining materials, the Government will assist in procurement and in some cases through subsidized supply of these materials.

39. Aided Self-help and Co-operative housing will only be one part of the approach. Rapid mass production of cheap, standardised dwelling units, with the assistance of proposed Housing Corporations for producing and marketing these units will be another facet of the programme. New types of thrift and credit institutions like Savings and Loans Building Societies will also be developed and expanded. These efforts, if fully successful, will lay down the foundations for a more effective solution during the Perspective Plan period *i.e.*, 1965-85. It is expected that by the end of the Perspective Plan period each house-hold will be housed in an independent dwelling unit. The target of the Third Plan is the development of 3,50,000 residential plots and the building of 2,92,500 residential houses on them; 1,32,500 in East Pakistan and 1,60,000 in West Pakistan. Adequate resources are

allocated in the Plan for meeting these targets. Fifty per cent of these plots and dwelling units are meant for lower income groups, forty per cent for middle income groups and ten per cent for upper income groups. Efforts will be made to discourage development of plots larger than 600 sq. yards. Vertical expansion will be encouraged instead of horizontal growth.

40. Another feature to be introduced is the programme for industrial workers' housing. The Plan proposes to set up Industrial Workers' Housing Corporations which will cater for the needs of Industrial workers by pooling the resources of the entrepreneurs, the workers and modest contributions from the government. Under the programme of Co-operative Housing, the Plan proposes to encourage the development of industrial workers' co-operatives which will also utilize these Corporations.

41. In the field of water supply, sewerage, drainage, garbage disposal, housing for public servants and government offices and buildings, first priority will need to be accorded to a selected programme for a few large metropolitan areas, urban areas having a rapid growth potential and selected small towns. However, in order to have a rational approach, it is necessary that this programme be integrated with the urban development and housing programme and should not be taken up in isolation.

42. It is necessary to review the existing policies governing the housing of public servants and explore ways and means of adopting new policies such as increasing the contribution of the private sector in meeting the requirements of public sector housing, constructing units for only those public servants who are liable to transfer or giving them a housing allowance instead of a house or encouraging them to build their own houses and integrating the housing programme for public servants with the general housing programme. By adopting these policies, direct responsibility of the government can be substantially reduced, and then a phased programme of meeting the essential needs over the Perspective Plan period 1965-85 can be prepared and implemented step by step. The needs for government offices and buildings and the new capitals at Islamabad and Dacca, are substantial and pressing, but due to extreme paucity of resources only a modest programme of the most essential needs can be taken up during the Plan period. However, by using modern functional and economical space standards as well as better and cheaper designing, utilizing local materials, intensive construction planning and management and more rigorous and careful estimating and supervision, it is possible to build a larger number of units within the existing allocations.

43. The most important feature of the sectoral strategy remains the physical planning approach which conceives the planning of the total environment, in order to effectively meet the urgent present needs of the urban and rural communities as well as prevent future dislocations and problems. A significant change in

the thinking is the recognition of the causation of physical planning and housing problems by economic development, and a recognition of the need to integrate physical planning within the national socio-economic development plan. The fundamental task therefore is to formulate systematic policies of population distribution in harmonywith the distribution of productive forces and development of natural resources. With such a frame of reference, a strategy of total environmental planning will need to be developed, for land use, transport, utilities, houses community buildings, facilities and services as well as environmental sanitation including air and water pollution. In order to achieve positive results, the national scale of planning will need to be further translated into a regional scale encompassing an effective participation and contribution of all local bodies within a planning region. Within this framework of regional plans, detailed physical development plans will need to be prepared for various urban and rural communities. These detailed plans should be based on careful survey and analysis.

V. DEVELOPMENT PROGRAMME

44. The development programme for the physical planning and housing sector in the Third Plan is framed in line with the long-run strategy outlined above and does, therefore, assign a high priority to schemes of Basic Development. This programme being of a foundational nature must serve as the necessary core of progress. In the immediate construction programme highest priority is accorded to low income public housing and housing for industrial workers. Next in order of importance are the provision of essential facilities such as safe drinking water, sewerage, drainage, garbage disposal and rural sanitation. In the rest of the programme, special emphasis is placed on the development and promotion of local planning and local government, in the form of "Aid to Local Bodies" as well as promotion and developments of sectoral plans and programmes in Special Areas.

Basic Development

45. This top priority programme consists of four integral parts, *viz.*, improvement of exisiting agencies, creation of necessary new institutions, preparation of physical plans on local, regional and provincial levels, planning and development of new towns and villages, and special projects for research, surveys mapping and collection of data, case studies as well as special projects and institutional development within the frame-work of Regional Co-operation for Development (currently including Pakistan, Iran and Turkey). It is proposed to create independent departments of physical planning and housing at Lahore and Dacca. The new Departments would be created partly by regrouping the existing scattered facilities and partly by adding essential staff and services. The U.N. Special Fund has agreed to assist this area, by launching a unique project in East Pakistan for preparing a

physical plan for the whole province with major emphasis on urban development. It is expected that this Special Fund Project will be initiated in September 1965 and will be finalized by the end of the Third Plan period. Besides preparing a Provincial physical plan, the project will seek to identify additional major urban centres, so that the provincial government may adopt a comprehensive approach for advance planning and development of these centres.

46. In West Pakistan, a pilot programme for comprehensive regional planning will be initiated and new towns and villages will be developed within such a regional approach. However, the basic principles for planning and development of these new towns in West Pakistan will be different from the ones adopted in East Pakistan. A special physical planning cell will also be developed at Lahore for providing leadership and guidance in addition to collecting data and carrying out special research and evaluation work.

47. The Plan proposes preparation of 45 Outline Plans, 23 Urban Development Plans, and 5 Regional Development Plans for both the provinces. Besides the preparation of development plans for villages, important urban centres and growing metropolitan areas, it is expected that in both the provinces special programmes will be initiated to pick up small centres in underdeveloped regions and develop these into appropriate urban centres for promoting balanced growth of these regions. In East Pakistan such an approach will be an intrinsic part of the Special Fund project, while in West Pakistan efforts will be made to select such centres in depressed regions of the province. Sanghar district in Sind will serve as a good example of an underdeveloped area, while Larkana city will serve as another example of an urban area drawing large investments without any physical plan or a comprehensive approach. Miranshah, Kohat Pass (Darra) and Landikotal will be picked up for a comprehensive programme for settlement of floating tribal population. Kohat and/or Bannu will be taken as an example for promoting balanced development in the north western parts of the province. Besides this emphasis on development of depressed regions, special efforts will be made to initiate comprehensive planning for growing metropolitan regions in the country which at the moment are centred around Karachi, Hyderabad, Multan, Lyallpur, Rawalpindi, Peshawar, Dacca, Chittagong and Khulna. In addition to these physical plans it is expected that in each province provincial water, sewerage, drainage and sanitation plans will be prepared for both urban and rural areas.

48. For rural uplift, an intensive programme of village planning with pilot projects for rural housing and rural sanitation is proposed. Rural water supply programme has already been under way since the First Plan period and considerable progress has been made. It is expected that at least 10,000 villages will be planned comprehensively during 1965-70 and 20,000 villages may be covered by the pilot project for rural sanitation. The Plan also proposes development of two special Institutes

or Academies for Physical Planning at Islamabad and Dacca for meeting the growing requirements of specially trained manpower as well as research and collection of data. The present programmes for training of city planners and architects at Lahore and Dacca will be strengthened and appropriate programmes for post-graduate training in City and Regional Planning will be initiated. Because of the shortage of trained manpower for physical planning and housing, the Plan contemplates that the services of various consultants and consulting firms of repute in these areas of specialization may be utilized more intensively in order to achieve the proposed targets. However, priority will be accorded to Pakistani consultants and consulting firms. Foreign experts and firms will be hired only where Pakistani technical expertise is lacking. Even if such an arrangement is necessary, efforts will be made to involve Pakistani experts and firms with these foreign consultants so that they may gain necessary training and experience for further work independently.

49. In order to establish a framework for more rational planning and programming for Public Health Engineering and to provide better and more efficient services, three Public Health Engineering laboratories/institutes will be established in various regions of the country. Modest progress made so far in initiating building and housing research at Lahore and Dacca will be further augmented. These institutes would be developed into full-fledged Building and Housing Research Centres with appropriate technical assistance. Preliminary work for preparation of special national and regional planning maps, survey of conditions, aerial photography, and related case studies for sectoral work will be taken in hand. Some of these studies and research projects will be conducted within the new framework of Regional Co-operation for Development under the Central Government programme.

50. In order to accelerate the development of Co-operative and Mutual Aid Housing, special Institutes for Co-operative Housing will be established. Provision has also been made for technical assistance and grants in aid to local bodies for physical planning, as well as award of prizes for low cost housing designs, special publicity and public education for the sectoral objectives, plans, policies and programmes. Provision also exists for financial assistance and grants-in-aid to professional institutes, councils and special non-governmental bodies for physical planning and housing. In order to improve the productivity and output as well as to meet the growing needs for building tradesmen, ten building trade schools will be established in suitable locations in the country. The projects for West Pakistan will be initiated within their technical education programme, and the ongoing programme of East Pakistan will be further expanded.

Housing

51. The programme consists of four parts *viz.* (*a*) slum improvement, clea-

rance and low income housing, (*b*) housing for industrial workers, (*c*) a modest programme for public servants housing, and (*d*) rural housing. The public sector programme for rural housing, essentially consists of pilot and demonstration projects. It is expected that some funds from Works Programme will be used for these efforts along with the resources allocated in the private sector. It is estimated that as a result of this technical guidance and encouragement, several thousand rural houses will be improved. Co-operative, Self-help and Mutual Aid housing techniques will be used as major instruments of implementing the programme. It is proposed to build 292,500 new dwelling units in urban areas and one million new dwelling units in the rural areas. The housing programme for industrial workers will be taken up by proposed Industrial Workers' Housing Corporation, which may be initially established under government sponsorship, with some seed capital, but should later be transferred to the private sector. A major part of the finance required will be raised by industrialists themselves. Part of the industrial workers' housing needs will also be met by the co-operative and general low income housing programme. Special technical and financial incentives will be provided for encouraging co-operative housing. As regards housing of public servants, due to scarcity of resources the plan proposes a rather modest programme, all of which will cater for essential needs of low income public servants, while the needs of the middle and upper income groups will be catered for by the special programme in the private sector.

52. It is also proposed to install special factories for light pre-fabrication of some housing components. It is expected that with appropriate technical assistance, two such experimental factories may be established, one in each wing of the country.

53. It is obvious that the total programme is extremely modest, keeping in view the full magnitude of the problem which continues to grow. However, if fully implemented, the programme will make a beginning towards finding solution of low income housing, as the total public sector programme is meant only for this group; while needs of the middle and upper incomes are adequately met by the private sector. The public sector programme does not contemplate 100 per cent provision of fully-constructed homes for the low income groups. It has been designed on the assumption that not more than 10 per cent of the total houses will be built by the government itself for pilot and demonstration purposes, and the remaining families or house-holds will be provided with a developed plot or a partial house built up to plinth level. Under all circumstances, the families and house-holds will pay for electric, water and sewerage connections.

Community Services and Utilities

54. Schools, health centres, post offices, transport and social welfare facilities for the urban and rural families are included in the programmes of related sectors. The physical planning approach would co-ordinate the development of housing

with these facilities and would in addition deal with community recreation, parks, watersupply, sewerage, drainage and sanitation. It is proposed to establish 150 parks and recreation areas and six special Rest and Recreation Homes and Centres for low income families, industrial workers and children. These areas, centres and homes will be developed within the framework of comprehensive regional and local plans and the special centres and homes will be reserved for the exclusive use of low income families and children. The water supply, sewerage, drainage and sanitation programmes are designed for both urban and rural areas. These projects will be carried out either as an integral part or in close co-ordination of the local and regional physical plans. The programme is designed to meet the needs of 60 urban areas and several hundred villages; in East Pakistan 200,000 hand-pumps and tubewells will be provided for the rural population, while in West Pakistan 600 villages will be supplied with potable water. Several thousand villages will also be covered by the pilot project for rural latrines and sanitation.

55. Special priority has been assigned to comprehensive water, sewerage, drainage and garbage disposal projects for important metropolitan centres of Karachi, Hyderabad, Multan, Lahore, Lyallpur, Rawalpindi, Peshawar, Dacca, Chittagong, Khulna and Rajshahi. Besides these eleven metropolitan centres, 49 other urban centres will also be catered for during the Plan period. These 49 centres will be selected partly on the basis of intensity of economic development, and partly on the basis of balanced regional development in each province. In order to meet the needs of trained manpower, research and analysis for such a programme, three special laboratories and institutes will be established in various parts of the country. Research will be conducted in air and water-pollution on local and regional scale and results implemented through appropriate legislation.

Government Offices and Buildings

56. Only the most essential government offices and buildings will be constructed during the Plan period and some of the offices will continue to utilize rented accommodation. Limited number of offices and buildings that will be constructed, will be based on functional and economical designs, with an intensive utilization of local materials. Efforts will be made to allocate and utilize space more according to functions of various public servants, and not necessarily allocated by their status. Ostentatious and expensive buildings will be discouraged in favour of simple and austere designs. Soil stabilization and bamboo may be used on experimental basis for government construction in order to provide a dynamic leadership for utilization of these materials in non-government programmes.

New Capitals

57. Due to their national importance and urgent need for completion of essential buildings, services and facilities, a hardcore programme for the new capital at Islamabad and second capital at Dacca is included in the Plan. The programme

consists of necessary office and residential accommodation which must be provided for an appropriate and efficient functioning of the central government in both the capitals. These projects are important landmarks and experiments in urban planning, building, housing and national architectural styles. It is expected that a dynamic leadership will be given to the country by evolving economical, functional and attractive designs, utilizing local materials and providing new specifications and methods of construction, construction planning and management, and by setting up standards for housing, community planning and civic buildings. The programme indicated in the Plan, will not only enable the twenty three divisions and selected attached offices of the central government to function harmoniously at Islamabad, but will also provide complete services, facilities and accommodation for all functions and needs of the National Assembly at Dacca.

Special Areas

58. In order to promote systematic and balanced development and growth in Northern, Frontier and Tribal regions as well as Azad Kashmir, a special programme of physical planning and housing has been prepared. The programme lays emphasis on preparation of urban and village development plans, low income housing, water supply, sewerage, drainage and sanitation, and essential needs of government offices and housing for public servants. A special programme has been designed for improving the living conditions in the tribal areas and encouraging a desirable settlement pattern for the nomadic population by developing certain centres. All investments in other sectors such as roads, industries, schools, hospitals, etc. will be guided by regional and local physical plans.

Aid to Local Bodies

59. The need for technical and financial assistance for preparing regional and local physical plans has already been recognized in the Basic Development programme. Special assistance and grants-in-aid will be available to Municipalities, Improvement Trusts and Development Authorities as and when necessary as a part of that programme. The programme included here attempts to assist in those special programmes of local bodies which cannot be dealt with, on a commercial or self-financing basis. These are schemes and projects catering for the needs of the lower income groups, slum-dwellers as well as special transport and recreational facilities or master plan projects which are not attractive commercial propositions. Resources cannot obviously be mobilized for these from the market. As the programme included here is quite modest, it is important that resources are utilized for the really essential but non-commercial schemes. It is expected that with the resources allocated for this purpose, these local bodies will develop 60,000 residential plots and 15,000 houses and/or flats for low income groups. By delegation of more powers and duties, Municipalities, Improvement Trusts and Development Authorities will be made responsible for implementation of these plans and would be given full control of urban growth and development. This will create need for

additional resources for various projects as well as technical guidance. Modest programme indicated in this part will also cater for these needs.

Development of the Private Sector

60. In housing, more than in any other sector, it is important to integrate the private sector programme effectively with the public sector, by defining policies which would bring forth initiative on the required scale. While the public sector programme is heavily weighted in favour of creating necessary facilities and developing plots for the construction of houses, the end-product in terms of number of houses actually built over the Third Plan would largely depend upon the efforts of private individuals and firms. In the Second Plan this was the major area of shortfall. It is estimated that during the Second Plan period the total number of new urban houses constructed by the private sector in the new residential areas is not more than 50,000 units and that most of the units were for upper income groups. The Third Plan aims at providing 292,500 new houses of which 2,12,500 are to be constructed in the private sector. It is apprehended that unless more powerful incentives are provided, the private sector would show a shortfall similar to that experienced in the Second Plan. A study of taxation policy affecting housing property shows that a heavy burden of taxes converging upon this source of income from three levels of government *viz.*, central, provincial and local, in addition to the cost of maintenance etc., acts as a major disincentive against investment in housing. The net return on housing investment is too low, compared to alternative avenues of investment, to attract substantial investment in this field.

61. Shortage of developed land, bureaucratic procedures, difficulty in obtaining key building materials and paucity of credit also contribute substantially to this slow pace of private sector. The effectiveness of the present tax holiday for housing investment is blunted by various conditions imposed, the principal ones being unrealistically low limit on rent and minimum requirement of a number of houses of a certain type to be constructed. In fact if any investor decides to avail of the tax holiday on the basis of conditions laid down, his net return may be lower than what it would otherwise be. This result arises from the fact that gross rent fixed under the tax holiday system is roughly 5 per cent of the total investment for low income houses and 7½ per cent of the total investment for middle income houses, on the basis of present costs of construction. These rates of gross return leave a very low net return despite the tax holiday in respect of income tax. This incentive has so far failed to attract investors to build housing estates for various income groups. It is, therefore, necessary that no rent restriction be placed on new housing for availing tax holiday. It is also necessary that tax holiday be made available to all types of investors, irrespective of number of units built as long as these units are meant for lower and middle income groups. The problem of pro-

viding incentives in this and other forms is being currently studied with a view to making house-building an attractive commercial proposition during the Third Plan.

62. Along with these fiscal incentives it is essential that the supply of credit for housing should not only be substantially increased, but also properly institutionalized. The House Building Finance Corporation is virtually the only credit institution at present active in the field of housing. Its activities are severely limited by inadequacy of resources at its disposal and limited number of branches in the country. It will be necessary to augment the resources at the disposal of the corporation by opening up the possibility of its borrowing from the market by way of sale of debentures guaranteed by the government. The response may be encouraging particularly from the insurance companies. The plan allocates Rs. 190 million for this Corporation, out of which Rs. 110 million may be made available from the Central programme for public housing and balance may be made available from special programmes of foreign aid giving agencies. However, it is necessary to initiate and develop new credit institutions as well. It is recommended that savings and loans societies and building associations should be established in the country on an experimental basis. Such societies and associations have played a remarkable role in a number of western countries in mobilizing private savings for house-building. In our country, they are specially useful as in addition to providing housing finance, they would generate additional savings by holding out the promise of a personal home to potential savers. One such association has already been established at Karachi. It is proposed to establish two more; one each at Lahore and Dacca.

63. The commercial banks are hesitant to provide credit against mortgage of real estate due to long delays attendant upon the disposal or transfer of such property. It is necessary to improve the property transfer and disposal legislation as well as set up a specialised mortgage institution which is not restricted by such liquidity considerations and can realise its dues over longer periods of time.

64. These tax incentives and credit facilities will not be effective unless a proper institutional framework for building industry is established with appropriate contact points with local, provincial and central governments. The Plan proposes that two private housing corporations be set up for building and marketing dwelling units for various income groups. It also proposes that two co-operative housing institutes be developed for initiating, guiding and promoting the development of co-operative housing societies. It is proposed to treat housing as an industry and provide incentives and necessary institutional arrangements for rationalising the building materials and tools industry as well as production of trained manpower. The present construction costs are quite high which retard the pace at which new houses can be constructed. These costs can be reduced by further research, standardisation, light prefabrication and mechanization of building industry and a more intensive

utilization of local materials and techniques as well as exploration of new use of old materials. It may be possible to have adequate funds for such a project in the private sector on a self-help basis by imposing a light charge on per bag sale of cement, using these proceeds for research in building and housing as well as promotion of cement industry. Similar type of schemes are in operation in other countries.

65. The problem of housing will have to be solved ultimately at the local level and accordingly it is essential to delegate necessary powers to local bodies for effective communication as well as decision making in case of private sector activities. Availability of raw or developed land at cost price as well as key buiding materials and other services and facilities to the private sector will go a long way in solving the problem in addition to fiscal and credit incentives outlined above. The Korangi, North Karachi and Lahore Township housing schemes as well as the new Capitals at Islamabad and Dacca can be used as pilot projects for initiating these new approaches in co-operation with the public sector. Construction of new houses by private sector in these pilot schemes may be given a complete tax holiday from income as well as property taxes initially for a period of 5 years from the date of completion of the house. There should be no pre-requisite for this tax holiday with respect to rent, number of rooms or type of construction. It is expected that with such a dynamic incentive private sector may make substantial contributions in these vital housing projects, and the experience gained may be utilized elsewhere in the country for achieving further results.

66. It is expected that with these financial, credit and institutional incentives the private sector may be able to build 2,12,500 dwelling units during the Plan period This will be in sharp contrast to the existing achievement of 50,000 units in the private sector during the Second Plan period.

TABLE I

SELECTED TARGETS FOR 1965-70

Items	East Pakistan	West Pakistan	All Pakistan
Physical Plans			
1. Regional Development Plans	3	2	5
2. Urban Development Plans	10	13	23
3. Outline Development Plans	20	25	45
Planned New Towns	3	3	6
Planned Villages	6,000	4,000	10,000
Community Services and Utilities			
1. Parks and Recreation Areas	50	100	150
2. Urban Water, Sewerage and Drainage (cities)	25	35	60
3. Rural Water Supply	200,000 Pumps & Tubewells	600 Villages	200,000 Pumps & Tubewells 600 Villages
Houses			
1. Low Income Urban houses to be built in the Public Sector	35,000	45,000	80,000
2. Urban Houses to be built in the Private Sector	97,500	115,000	212,500
3. Self Help Rural Housing (under Works Programme and Private Sector)	700,000	300,000	1,000,000
New Institutions			
1. Physical Planning Institutes at Islamabad and Dacca	1	1	2
2. Cooperative Housing Institute	1	1	2
3. Industrial Workers' Housing Corp.	1	1	2
4. House Building Corporation	1	1	2
5. Savings and Loan Building Association	1	1	2
6. Building and Housing Research Centres	1	1	2
7. Building Trade Schools	4	6	10
8. Experimental Factories for Prefabricated Houses	1	1	2
9. Public Health Engineering Labs. and Institutes	2	1	3

TABLE II

PHYSICAL PLANNING AND HOUSING DEVELOPMENT PROGRAMME FOR 1965-70*

A. Public Sector (Million Rupees)

Sub-Sector	East Pakistan	West Pakistan	Centre	All Pakistan
Basic Development				
1. Building and Public Health Engineering Research	14.0	5.9	—	19.9
2. Mapping, Physical Planning and Urban Development	30.0	17.5	—	47.5
3. Other Projects	16.0	1.0	31.0	48.0
Sub-Total	60.0	24.4	31.0	115.4
Housing				
1. Slum Improvement and Public Housing	296.0	243.60	110.0**	649.60
2. Public Servant's Housing	60.0	119.39	60.0	239.39
Sub-Total	356.0	362.99	170.0	888.99
Community Services and Utilities				
1. Urban Water, Sewerage and Drainage	510.0	256.20	—	766.20
2. Rural Water Supply and Sanitation	40.0	86.30	—	126.30
3. Other Projects	10.0	—	—	10.00
Sub-Total	560.0	342.50	—	902.50
Government Offices and Buildings	90.0	115.81	64.0	269.81
New Capitals	—	—	540.0	540.00
Special Areas	—	2.36	15.0	17.36
Aid to Local Bodies	194.0	98.10	—	292.10
Total Public Sector	1260.0	946.16	820.0	3026.16
B. Private Sector				
Co-operative Societies	100.0	150.0	—	250.0
Public Housing Corporations	250.0	200.0	—	450.0
Industrial Workers Housing Corpns.	150.0	200.0	—	350.0
Private House Construction	1850.0	1100.0	—	2950.0
Total Private Sector	2350.0	1650.0	—	4000.0
Total Public and Private Sectors	3610.0	2596.16	820.0	7026.16

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*This table shows only a consolidated abstract of the overall programme. Detailed programme and projects are shown in the list of schemes published separately.

** Development Budget allocation for House Building Finance Corporation.

TABLE II

PHYSICAL PLANNING AND HOUSING

DEVELOPMENT PROGRAMME FOR 1965-70*

(Million Rupees)

Sub-Sector	East Pakistan	West Pakistan	Centre	All Pakistan
A. Public Sector				
Basic Development				
1. Building and Public Health Engineering Research	14.0	5.9	—	19.9
2. Mapping, Physical Planning and Urban Development	30.0	17.5	—	47.5
3. Other Projects	16.0	1.0	51.0	68.0
Sub-Total	60.0	24.4	51.0	135.4
Housing				
1. Slum Improvement and Public Housing	296.0	243.60	110.0**	649.60
2. Public Servant's Housing	60.0	119.39	60.0	239.39
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** Development Budget allocation for House Building Finance Corporation.

APPENDIX I

ABSTRACT FROM THE THIRD PLAN

Regional Distribution of Third Plan Distribution

(Rs. Million)

	East Pakistan	West Pakistan	Total
Government financed programme	16,000	14,000	30,000
Private investment	11,000	11,000	22,000
	27,000	25,000	52,000

Sectoral Allocations in the Third Plan

(In percentages)

Sector	Second Plan (Estimated Expenditure)	Third Plan (Proposed Allocations)	Increase in Third Plan over the Second Plan Outlay
Agriculture	13.3	15.4	128
Water and Power	18.6	15.2	62
Industries, Fuels and Minerals	27.6	26.1	87
Physical Planning and Housing	14.8	12.7	70
Transport and Communications	17.1	17.9	106
Education	3.8	5.1	165
Health	1.5	2.3	203
Manpower and Social Welfare	0.3	0.5	238
Works Programme ...	3.0	4.8	213
Total	100.0	100.0	97

Third Plan Allocation by Sectors and Regions

(Rs. Million)

	East Pakistan			West Pakistan		
	Public	Private	Total	Public	Private	Total
1. Agriculture	2,385	2,100	4,485	2,285	1,900	4,185
2. Water and Power	3,790	1,000	3,890	4,630	550	5,180
3. Industry	3,100	3,800	6,900	1,480	4,500	5,980
4. Fuels and Minerals	360	300	660	340	450	790
5. Transport and Communications	3,205	2,100	5,305	3,095	1,800	4,895
6. Physical Planning and Housing	1,585	2,350	3,935	1,445	1,650	3,095
7. Education	1,495	200	1,695	1,235	100	1,335
8. Health	715	20	735	615	20	635
9. Manpower	70	10	80	45	10	55
10. Social Welfare	75	20	95	50	20	70
11. Works Programme	1,500	...	1,500	1,000	...	1,000
	18,280	11,000	29,280	16,220	11,000	27,220
Less: Expected shortfall	—2,280	...	—2,280	—2,220	—	—2,220
	16,000	11,000	27,000	14,000	11,000	25,000

Part IV

PRODUCTION PROGRAMMES

CHAPTER XX

AGRICULTURE*

The Importance of Agriculture

1. Though the contribution of the agricultural sector to the gross national product has declined from about 60 per cent in 1949-50 to less than 50 per cent in 1964-65—mainly due to rapid industrialization—agriculture is still the largest segment of the economy. About 85 per cent of the population lives in rural areas and most of this population is directly or indirectly dependent on agriculture for its livelihood. Development of agriculture is thus the *sine qua non* for the development of the country's economy.

2. The importance of agriculture from the point of view of its share in production, consumption, exports, and employment makes its development one of the most critical issues in planning. Rapid growth of agriculture will permit the unhampered expansion of other sectors which depend on agricultural demands and supplies, and will insure income gains to a large segment of the population. It is difficult to overstate the importance of agricultural growth for determining the potential of the entire economy.

Progress during the Second Plan Period

3. The progress of agriculture during the Second Plan period has been one of the most heartening aspects of the entire development effort in Pakistan. The growth in agriculture, which was shared about equally by both Provinces, was over 3.5 per cent per annum. This was nearly triple the 1.3 per cent rate that had characterized the period up to the mid-1950's and was one of the highest rates found in any developing country.

4. More specific information about the performance of several major commodities is given in Table 1. These data show Second Plan benchmarks, Second Plan targets, and the expected production at the end of Second Plan period. While there is inevitably some year to year variation in production because of weather factors, the information in Table 1 reflects the same general movements in production that are shown by more refined trend analyses. For several major commodities (foodgrains, sugarcane and cotton), targets were exceeded by the fourth year of the Second Plan. On the other hand, it seems unlikely that jute and tobacco

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* The agricultural sector of Pakistan is large and complex, and contains many important development programmes. Only the highlights are presented here ; full details are given in an important three-part supplementary volume, "Agriculture in the Third Five Year Plan".

will have grown to target levels. In value terms, the large crop subsector of agriculture grew at about 4.3 per cent between 1959-60 and 1963-64, and was the leading force in high overall agricultural rate cited above.

TABLE I

SECOND PLAN BENCHMARK; TARGETS AND PERFORMANCE—SELECTED MAJOR CROPS, ALL PAKISTAN

Crop 1	Second-Plan benchmarks 2	Second Plan Targets 3	Third Plan Benchmarks 4	Increase of Col. 4 Over col. 2 5
		in thousand tons		*in Per cent*
Rice	8340	10165	11400	36.7
Wheat	3705	4330	4157	12.3
Sugarcane	15430	20800	20750	34.5
		in thousand bales		
Cotton	1666	2292	2217	33.1
Jute	6000	7300	6200	3.3
		in million lbs.		
Tea	54.3	63.8	56.0	3.1
Tobacco	223.0	254.7	233.0	4.4

5. The other subsectors of agriculture, however, also expanded. The National Income Commission Report indicates that livestock and livestock products grew at about 2.0 per cent per annum, forestry at 4.7 per cent, and fisheries at 3.1 per cent. Thus, the general agricultural picture for the Second Plan was one of progress on a wide front.

6. The manner in which the above gains were brought about is of prime importance for explaining the results of the Second Plan and for understanding the objectives and strategy which underlie the Third Plan. This is particularly true for the crop subsector, where reasons for the past performance can be grouped conveniently under three main headings: increases in improved inputs, improvements in the institutional framework and the institutions serving agriculture, and improvements in agricultural policy. These were all closely related aspects of the agricultural development that took place, and to a large extent, it was the latter two which led to the greater utilization of improved inputs.

7. Of special importance to rural growth has been the revised agricultural policy of the last five years—particularly with regard to incentives to farmers. For example, the forced procurement of wheat at below market prices, which had characterized much of the First Plan period, gave way in 1960 to a support and buffer-stock operation. Of similar impact was the reduction of export duties on the

key crops of cotton and jute, and the increased attention paid by farmers to cropping patterns based on comparative advantage. Finally, the general policy of the Governments to subsidize the key agricultural inputs, such as fertilizer, plant protection, seeds and water, permitted Pakistani farmers to purchase improved inputs at especially favourable prices. While it is impossible to isolate completely the effect of these forces from the general extension effort to spread technological knowledge, the public development of certain water resources, etc., it is clear that general agricultural policy during the Second Plan helped create a climate which called forth the individual initiative of a sizeable portion of Pakistan's twelve million farmers.

8. Progress in programmes designed to strengthen the organizational and institutional framework in agriculture also deserves special mention. The Agricultural Development Corporations (ADC's) set up in 1961, overcame many of their initial problems of staffing and organization, and by the end of the Second Plan had taken on major responsibilities for implementing agricultural programmes. In addition to supplying seeds, fertilizers, and implements to farmers, the West Pakistan A.D.C. had taken up five project areas for intensive development. The East Pakistan A.D.C. was also instrumental in the distribution of inputs, and arranged for survey operations in the Chittagong Hill Tracts as a step towards taking up that area for intensive work. In addition, the agricultural extension services were considerably improved, both quantitatively and qualitatively during the Second Plan, and new agricultural research and educational facilities were created by opening research institutes, research sub-stations and two full-fledged agricultural universities. At the same time, better credit and marketing facilities were provided, and the land reforms in West Pakistan substantially implemented. These accomplishments are difficult to quantify in terms of the rate of growth, but their importance during the last five years cannot be minimized.

9. A strengthened institutional framework for agriculture and more incentives for farmers resulted in spectacular increases of improved inputs into agriculture during the Second Plan period. The 15 per cent increase in irrigation-water availability in West Pakistan, due in large measure to the public and private tube-well development, and the irrigation and flood-control projects of East Pakistan permitted about 1.8 million new acres to be brought under cultivation and allowed yields to be improved on some 8 million acres. The extensive promotional campaign, the over 50 per cent subsidy and the change in policy which allowed the private trade to share in distribution, were primarily responsible for the over four-fold increase in the use of chemical fertilizer—32,000 nutrient tons in 1959-60 versus an expected 162,000 nutrient tons in 1964-65. Other improved inputs included a more than tripling of the area covered by plant protection measures and substantial increases in the cropped area planted with relatively improved seeds.

10. Clearly, then, the agricultural progress of the Second Plan was more than a weather phenomenon. An extensive—though necessarily crude—analysis of agriculture done by an economist suggests that on a trend basis the value of crop output in West Pakistan grew at about 5 per cent per year or 26 per cent for the 5 years. Of this increase, it is estimated that ground water development accounted for about 9 per cent, fertilizer 5 per cent, plant protection and surface water development 4 per cent each, improved seeds 3 per cent and other factors about 1 per cent. On the same basis it was found that the value of crop output in East Pakistan grew about 20 per cent during the 5 years. Of this increase, it is estimated that about 5 per cent came from extension of area, about 5 per cent from fertilizer, about 4 per cent from improved seeds, about 2 per cent from plant protection and the remainder may be attributed to changed rice technology and increased labour inputs.

11. The substantial gains in production of the Second Plan have demonstrated that agriculture is capable of growth given appropriate policies and programmes. This is not to say, however, that problems of a very serious nature do not remain for the agricultural sector. Adequate protection against floods in East Pakistan, and against water-logging and salinity in West Pakistan will pose a serious challenge for at least a decade or more. There are also problems that arise from an insufficient number of agricultural technicians and from attempting to transfer technical information to illiterate farmers, to increase the supply of animal proteins, to guarantee a timely and adequate supply of credit and improved inputs and to provide marketing and storage system which assures farmers of reasonable prices for their produce. These and other problems will not permit a resting on laurels; they will instead demand increased efforts during the Third and later Plans on the part of farmers and the agencies serving agriculture.

Objectives, Strategy and Targets

12. The objectives and strategy that underlie the Third Plan are designed to take advantage of the accumulated agricultural momentum of the last 5 years, and to tap the potential and solve the problems that remain in the rural economy of both Provinces. These goals, which are also formulated within the context of the Perspective Plan, are very broadly defined as follows:

(a) To increase the real income of farmers at least at the same rate as per capita increase in the non-agriculture sector;

(b) To move towards self-sufficiency in food requirements to the extent compatible with the other needs of the economy, including foreign trade, aiming at the same time, at improved nutritional standards in food consumption; and

(c) To promote agricultural development on a sound, self-propelling basis by further improvements in agricultural organizations, and by intensified programmes such as for the developments of marketing, cooperatives, storage, credit, educational, and other institutional and infra-structural facilities.

13. The specific means for fulfilling these objectives are described at length in the following section on Third Plan Programmes. In general, however, the overall strategy emphasises the necessity for creating an economic climate in rural areas which will call forth a maximum initiative from farmers as individuals and as a group.

14. In this regard, promotional subsidies will continue to play a key role, especially with regard to fertilizer, water, plant-protection, improved seeds and the use of machinery. These subsidies will, however, be reviewed periodically during the Third and later Plans, and after the majority of farmers have had experience with improved inputs, the grants will be reduced. Another aspect of incentives for farmers will be limited price-support and stabilization operations. While major reliance will be placed on competitive forces within the rural economy, increased attention will be given to support and buffer-stock operations for the major food crops. Such operation will attempt to guarantee reasonable prices to farmers as well as to consumers. In this connection, judicious use will be made of commodities obtained under P.L. 480 auspices. Support-price mechanisms will be used to a limited extent to bring about the rapid increase of particular crops, to meet special needs and demands of the economy. Also, there is good scope for increasing prices received by farmers through better marketing facilities and improved credit arrangements, and these programmes will be strengthened during the Third Plan.

15. A second element of strategy involves the relative roles of the private and public sectors in agriculture. Given the size, the complexity, and the problems of rural Pakistan, there is clearly a room for a maximum effort by both. The role of the private sector with regard to production has already been stressed. In addition, there is a large scope for private distribution of improved inputs. The public sector, on the other hand, will concentrate mainly on subsidies on physical inputs, rural infra-structure, rural credit, education, extension, and marketing.

16. The final aspect of strategy centres round the long-run and the short-run aspects of the agricultural programme. It is realized fully that long-run growth in agriculture will be dependent on the development of organizations serving agriculture, on a technically competent and fully-equipped extension service and on agricultural research that can invent or adapt new technologies relevant to the country. At the same time, it is recognized that these programmes, by their very nature, will be a lengthy process that will be limited more by human-resources development than by financial allocations. It is further recognized that in the shorter run, growth in agriculture must come from the application of a package of presently-available inputs, particularly fertilizer, water, improved seeds and plant-protection measures. Thus, the basic tactic has been to provide the full financial and human resources so essential to the long-run development of institutions in agriculture, while at the same time concentrating on a limited number of inputs that can provide substantial growth in the immediate future.

17. On the basis of these objectives and strategy, the physical targets for the Third Plan have been set. These totals, shown by Provinces in Table 2, are projected on the basis of planned inputs which are described in detail in the supplementary volume. They provide for about a 6 per cent growth in crop output, which, when coupled with the anticipated growth in the combined subsectors of livestock, forestry, and fisheries, will provide for an overall increase in agricultural value of about 5 per cent per annum.

TABLE 2
BENCHMARKS AND TARGETS OF CROP PRODUCTION FOR THIRD PLAN

	Third-Plan Benchmarks(*a*)			Third Plan Targets			
Crop	East Pakistan	West Pakistan	Total	East Pakistan	West Pakistan	Total	Increase, targets over bench-marks, All Pakistan
	………………………	……… *in thousand tons*	………	………………	………………	………………	*in per cent*
Rice	10,200	1,200	11,400	12,725	1,720	14,445	27
Wheat	37	4,120	4,157	64	5,400	5,464	31
Maize	5	500	505	16	770	786	56
Other Foodgrains	18	720	738	20	750	770	4
Sub-total:	10,260	6,540	16,800	12,825	8,640	21,465	28
Gram	34	616	650	38	700	738	13
Pulses	190	170	360	275	220	495	38
Sugarcane	4,900	15,850	20,750	7,050	21,250	28,300	36
Cotton Seed	6	770	776	7	1,230	1,237	59
Other Oil Seeds	156	245	401	270	320	590	47
Fruits	1,400	750	2,150	1,760	950	2,710	26
Vegetables	1,250	1,050	2,300	1,625	1,480	3,105	35
			in thousand bales				
Jute	6,200	—	6,200	8,000	—	8,000	29
Cotton	17	2,200	2,217	20	3,500	3,520	59
			in million pounds				
Tea	56	—	56	73.5	—	73.5	31
Tobacco	63	170	233	78	195	273	17

(*a*) Determined mainly on the basis of 10 years linear trends.

18. These targets will provide for increases in production greater than the expected increases in population. It is estimated, for example, that the per capita consumption of domestically-produced output will increase from about 1,725 calories per capita per day in 1964-65 to over 1,900 calories in 1969-70. Of, perhaps, even more importance will be the greater than proportionate growth in the diet of other non-cereal foods, especially the protective and proteinous foods. In addition to the food portion of the targets, two other cash crops deserve special comment. Of the cotton target of 3.5 million bales about 2.1 million bales will be used domestically and will permit about 1.4 million bales for export. Similarly, the production target for jute of 8 million bales will provide the 5 million bales required by local mills and allow about 3 million bales to be exported. Overall, the 5 per cent growth target for agriculture is bold and ambitious. Nevertheless it is feasible given the inputs, the strengthened institutions, and the policies planned for the Third Plan. Its attainment is essential for developing the full potential of all sectors of the economy.

PROGRAMMES FOR THE THIRD PLAN

CROP PRODUCTION

Irrigation, Drainage and Reclamation

19. In West Pakistan, water is the most important single factor for increasing agricultural production and productivity. The Province is climatically arid and semi-arid except for the small zone lying below the Central Himalayas in the North. Of the total geographical area of about 200 million acres, only about 41.4 million acres are cultivated, of which one-fourth is rainfed, and the remaining three-fourths is irrigated by a vast canal system (*See* Table 3). Unfortunately, irrigation water supplies are limited and in many areas farmers have reacted by spreading the water thinly and allowing it to percolate only to the depth of the plant roots. The result has been large accumulation of salt in the root zone, which together with the extensive seepage from the canal network, has produced conditions of water-logging and salinity as a result of which between 70,000 and 100,000 acres are being lost to cultivation each year.

20. Water is also the major problem of East Pakistan. The Province has a monsoon climate and out of 35 million acres, about 22 million acres are cultivated under rainfed conditions (*See* Table 3). The rains, however, fall during a relatively short period of time (June-September). These monsoon rains are usually adequate in total but their failure in certain years causes drought, and their abundance in other years results in floods. On the other hand, winter rains are generally not sufficient for crop production.

TABLE 3

LAND UTILIZATION, BY PROVINCES

	East Pakistan(*a*)	West Pakistan(*b*)	Total
		in million acres	
Total area	35.3	198.7	234.0
Net sown area	20.3	33.4	53.7
Current fallow	1.4	8.0	9.4
Total cultivated area	21.7	41.4	63.1
Forest area	5.5	3.1	8.6
Area not available for cultivation	5.6	31.8	37.4
Other cultivable land (excluding current fallow)	1.9	24.1	26.0
Area not reported	0.6	98.3	98.9

Source (*a*) Land and Crop Statistics of Pakistan June, 1962. The data relate to the year 1957-58. Data for later years are not available.

(*b*) Statistics of West Pakistan Agricultural Data—1947-48 to 1962-63, Bureau of Statistics, Planning and Development Department, West Pakistan, Lahore. Data relate to 1962-63.

21. The critical need for water development has prompted the Government to harness water resources for developing irrigation facilities especially in West

Pakistan, to check on rush of saline sea water in the coastal areas of East Pakistan and to control floods and provide drainage facilities in both the Provinces. Increasingly intensive efforts are being made by the Government to control waterlogging and salinity in West Pakistan through vertical and horizontal drainage. All these programmes including the installation of tubewells by the farmers on private account, help increase agricultural production in several ways: by bringing virgin lands under cultivation, by increasing the intensity of cropping, by improving cropping patterns, by increasing the output per unit area and by saving the destruction of crops from floods.

22. A part of the water development programme under the Third Plan will be implemented within the agricultural sector. In East Pakistan, the major source of water-induced agricultural growth during the Third Plan period will be the low lift pump scheme of the Agricultural Development Corporation. The goal of the programme is to increase the area irrigated by power pumps from 200 thousand acres by the end of the Second Plan to 750,000 acres by 1969-70. Major benefits of the project will come during the *rabi* season; however, considerable scope exists for providing additional water at the beginning of the *aus* and end of the *aman* season, when uncertain moisture conditions may result in substantial reductions in yield. In West Pakistan, effective administrative arrangements have been made within the Department of Agriculture for the installation of tube wells. In addition to actually installing a substantial number of tubewells for private individuals, the Department's widespread drilling activities have been a major factor in spreading tubewell technology throughout West Pakistan. With the new equipment provided under the Third Plan mechanization programme, a goal of 15,000 tubewells by the Department of Agriculture has been set for the Plan period Table 4 gives past performance and the anticipated achievements.

TABLE 4

PAST PERFORMANCE AND PROPOSED TUBEWELL PROGRAMMES OF THE DEPARTMENT OF AGRICULTURE

	First Plan	Second Plan	Third Plan
No. of Tubewells	1,600	5,750	15,000

23. It is also expected that the number of tubewells being installed by private firms will go up considerably during the next five years. In order to accelerate the tempo of this progress and to extend the benefits to smaller farmers, the subsidies being allowed at present on installation of open wells and tube-wells will continue during the Third Plan period.

24. The water resource development programme during the Third Plan is expected to serve about 4.1 million acres of new area and 19.8 million acres of already cultivated land. However, the area actually showing incremental outputs will be less than these totals, because of the transitional process and some time

lag between the commissioning of the areas and their production. Accounting for such factors, it is estimated that in West Pakistan 1.7 million acres of additional land will be cropped, 8.3 million acres of already cultivated area will improve in acre-yields, and 2.0 million additional acres will be added as a result of higher cropping intensities. On the same basis, it is estimated that in East Pakistan the irrigation and reclamation programmes will bring under cultivation 2.1 million acres of additional area, and 2.7 million acres of already cultivated area will be improved during the Third Plan period. The consolidated position of the area cropped at the end of each of the three Plan periods resulting from the implementation of all water development and drainage schemes is shown in Table 5.

TABLE 5

ESTIMATED AREA UNDER CROPS AND LIKELY ADDITIONS DURING THE SECOND AND THE THIRD PLANS AS A RESULT OF IRRIGATION AND DRAINAGE PROJECTS

	East Pakistan	West Pakistan	Total
		in million acres	
Cropped area at the end of the First Plan	26.6	34.2	60.8
Additions to cropped area by the end of the Second Plan	0.4	1.4	1.8
Additions to the cropped area during the Third Plan	2.1	3.7(*a*)	5.8
Total cropped area expected by the end of the Third Plan	29.1	39.3	68.4
Existing area estimated to be improved during the Second Plan	2.4	5.8	8.2
Existing area likely to be improved during the Third Plan	2.7	8.3(*b*)	11.0

(*a*) These figures are derived after deducting the area estimated likely to go out of cultivation as a result of spread of water-logging and salinity.

(*b*) The cultivated area served by irrigation and drainage schemes will be about 17.1 million acres. However, the area benefitted during the Third Plan will be 8.3 million acres.

25. The growth in agricultural output during the Second Plan period was intimately linked to the increase in water supplies from both public and private sources. This growth will gather greater momentum during the Third Plan period as a result of (a) a substantially expanded public sector programme for irrigation, drainage and flood-control, and (b) a rapid increase in the installation of tubewells and low-lift pumps by the private sector. These expanded programmes will alter agriculture radically. New lands will be cultivated, intensities and yields will be increased and new and more profitable cropping patterns will be possible. The sum of these effects will account for the achievement of an important part of the challenging target of agricultural growth set for the Third Five-Year Plan.

Mechanization and Farm Implements

26. Mechanization will play an increasingly important role in the agricultural sector during the Third Plan period. In many parts of East Pakistan, it is possible to raise two, and even three crops on the same land during a year, provided that in addition to the availability of water, facilities exist for quick tillage of the land immediately after harvest. Intensive agriculture in West Pakistan also requires quick ploughing where irrigation facilities are available. In addition, development of new areas for cultivation, especially in new irrigation projects, requires mechanized levelling and tillage. Performance during the last decade and expected achievements of the Third Plan public programmes are shown in Table 6.

TABLE 6

MECHANIZATION IN EAST AND WEST PAKISTAN, BY PLAN PERIODS

	First Plan	Second Plan	Third Plan
		in thousand acres	
East Pakistan			
Area ploughed (last year of the Plan)	7	25	40
West Pakistan			
Area ploughed (last year of the Plan)	7	40	75
Area developed (during the Plan)	237	345	1,000

27. The East Pakistan Agricultural Development Corporation has been testing different makes of power tillers to determine the best makes for use in the Province. As soon as the results of these trials become available, an educational campaign will be launched to popularise the use of the approved power tillers. A plant will also be set up during the Third Plan period for their assembly and/or manufacture within the country. Meanwhile, it is recommended that power tillers be placed on the free list of imports, and that adequate credit facilities be provided to cultivators who wish to purchase them.

28. The scope for mechanization in West Pakistan is also very large. With increased irrigation facilities, substantial areas now lying uncultivated within the irrigated tracts and along the rivers can be brought under cultivation. Areas in Quetta and Kalat Divisions that get "sailaba" water from the hill torrents can also be developed.

29. During the Third Plan, the number of tractors in both the public and private sectors in West Pakistan will be further augmented. Requirements of wheel-type tractors by private individuals will be met increasingly by local manufacturers. An assembling plant has been set up that will be completely converted eventually to domestic manufacturing. This firm will provide approximately 500 tractors in the first year, and about 1,500 by the sixth year of operation.

30. During the First Plan period the existing fleet of Government operated tractors was strengthened and seven agricultural workshops were set up in West Pakistan for operation, maintenance and repair of machinery, training of mechanics and operators, and for allied research. Additional agricultural machinery was procured during the Second Plan and these seven workshops were reorganised and strengthened while six new sub-shops were set up to cope with the expansion of the programme. During the Third Plan workshop and repair facilities will be extended up to the district level to improve the efficiency of the machinery.

31. The programme started in West Pakistan during the Second Plan for distributing improved implements at subsidised prices, will be expanded during the Third Plan period. A paddle thresher suitable for local condition has been developed at Lyallpur and is being manufactured for use by the cultivators.

32. Facilities will be provided for carrying out intensive research especially at the Lyallpur and Dacca workshops for evolving improved implements and machinery suited to the needs of various areas. Experiments will be undertaken to explore the possibilities of introducing sprinkler irrigation in the country.

Fertilizers and Manures

33. Experiments so far conducted on the soils of both East and West Pakistan have shown that the use of fertilizers is one of the quickest, and perhaps cheapest, means for increasing agricultural production. This belief is further strengthened by the fact that during the Second Plan period the use of fertilizers by the farmers increased five fold from a base level of 32 thousand tons of plant nutrients.

34. Part of the substantial increase in fertilizer off-take during the latter part of the Second Plan period should be attributed to the increased role of the ADCs and the private trade in fertilizer distribution and the continued subsidy of over 50 per cent. Further encouragement of private participation will be part of the basic strategy for increasing fertilizer sales during the Third Plan period. At the Union level in East Pakistan, the main bulk of the fertilizer will be distributed by private dealers acting as approved distributors of the Agricultural Development Corporation. In West Pakistan, the responsibility for the distribution of domestically produced fertilizer rests with the West Pakistan Industrial Development Corporation (WPIDC); imported stocks are handled by the Agricultural Development Corporation. Domestic supplies will continue to be distributed from the mandi (Secondary market) level by private stockists appointed by WPIDC. Fertilizers will be distributed by private dealers as well as through village depots by the Rural Supply Co-operative Corporation.

35. The use of fertilizers will be one of the most important factors for increasing agricultural production during the Third Plan period. The aim will be to triple the use of fertilizer from a level of 162 thousand tons (in terms of plant

nutrients) in 1964-65 to about 484 thousand tons in 1969-70 (*See* Table 7). The Third Plan also provides for a two fold increase in fertilizer use in Special Areas.

TABLE 7

ESTIMATED DISTRIBUTION OF CHEMICAL FERTILIZER AT THE END OF EACH PLAN PERIOD

Nutrient	East Pakistan	West Pakistan	Total
		in thousand tons	
Nitrogen (N)			
1959-60	12	19	31
1964-65	54	84	138
1969-70	133	198	331
Phosphorous (P)			
1959-60	1	—	1
1964-65	18	2	20
1969-70	81	37	118
Potash (K)			
1959-60	—	—	—
1964-65	4	—	4
1969-70	20	15	35
Total (NPK)			
1959-60	13	19	32
1964-65	76	86	162
1969-70	234	250	484

36. To ensure the successful implementation of the entire programme, the steps mentioned below will be undertaken:

(*a*) An intensive educational campaign will be conducted by the extension staff through demonstrations and other means. Particular emphasis will be placed on communicating the value of balanced applications of nitrogenous, phosphatic and potassic fertilizers.

(*b*) The policy of subsidizing the sale of fertilizer will continue throughout the plan period, but the amount of subsidy will be reviewed periodically.

(*c*) The distribution system will be further reviewed and streamlined so that fertilizers and manures are available within easy reach of the farmers.

(*d*) Gradually, the distribution of fertilizer will be transferred to the private trade with the ADC made responsible for coordination and supervision of the programme. The aim is to develop a multiple private trade distribution system such as now prevails for kerosene oil and other items in common rural use.

(*e*) Necessary credit facilities will be provided to enable farmers to purchase fertilizers.

(*f*) The supply of fertilizer will be assured through provision of ample foreign exchange to meet the full requirements of the farmers.

37. Gypsum, as a soil amendent can be used with great advantage to improve alkali soils which are generally found in West Pakistan. The Third Plan provides funds for initiating a programme for experimentation with gypsum and its distribution to the cultivators. Organic manures such as bone-meal, oil-cakes and compost will continue to be popularised amongst the farmers. It is recommended that a programme for the use of hitherto unutilized sullage water and night soils in and around big cities should be prepared and implemented.

38. Levels of fertilizer use in Pakistan are still far below those of most other countries. The unprecedented increase in off-take during the latter part of the Second Plan period indicates, however, that farmers are becoming aware of the advantages of using fertilizer. This can be capitalized on during the Third Plan period if determined efforts are made to intensify extension activities and to procure and make available adequate and timely supplies of fertilizer in the rural areas. Successful implementation of the programme outlined above will be a decisive element in achieving the agricultural targets of the Plan.

Plant Protection

39. In order to avert the losses caused by pests and diseases, the Government has undertaken a two-pronged action programme featuring both curative and preventive plant protection measures. Curative measures consist of ground and aerial spraying against the attack of pests and were the major emphasis of the plant-protection programme during the First and Second Plan periods. The area covered by preventive measures in the same period was relatively small and confined mostly to the treatment of seeds against seed and soil-borne diseases. (*See* Table 8).

40. Preventive measures, as compared to curative measures are less costly. As part of the Third Plan plant-protection strategy, additional emphasis will be given to measures designed to prevent the attack of pests and diseases. Seed treatment and preventive spraying of crops will be taken up on a large scale wherever required, to control such pests as bollworm and jassids of cotton, stemborer of sugarcane, rice and maize, swarming caterpillar of rice and white and black fly of citrus. Acreage expected to be covered during the Third Plan period by both preventive and curative measures are also given in Table 8. The coverage by plant protection measures will be doubled in the Special Areas.

TABLE 8

AREA COVERED BY PLANT PROTECTION OPERATIONS AT THE END OF FIRST AND SECOND PLAN PERIODS, AND TARGETS FOR THE THIRD PLAN

	East Pakistan	West Pakistan	Total
		in million acres	
Curative measures			
1959-60	0.4	1.4	1.8
1964-65	3.4	3.1	6.5
1969-70	6.0	6.0	12.0
Preventive measures*			
1959-60	*Neg.*	2.3	2.3
1964-65	0.3	3.0	3.3
1969-70	5.5	8.5	14.0

Note: *This includes the area sown with seed treated against seed and soil-borne diseases.

41. In order to achieve the targets of plant protection coverage set in the Third Plan, timely availability of the necessary chemicals and equipment is essential, for in plant protection work, timeliness of application determines the success or failure of the programme. Every effort will be made to ensure that delays in imports and in procurement from domestic suppliers do not hamper the effectiveness of the programme.

42. It was recommended in the Second Plan that in order to encourage private distribution and utilization of pesticides, licences for the import of pesticides should be given to experienced companies. However, this has not been done. With the planned expansion of plant protection activities in the country during the Third-Plan period, such a policy takes on increased urgency. In fact, handing over a part, if not the whole, of the responsibility for plant protection work to private agencies must be seriously considered. Initial steps in this direction might begin on a pilot project basis in, for example, the SCARP I or Agricultural Development Corporation's project areas. If plant protection coverage based on private enterprise shows itself to be feasible in these areas, the experience gained can readily be utilised to extend the programme throughout the country. Of primary importance under a programme based on the efforts of private enterprise will be an intensive and comprehensive education programme. It will also be necessary to prescribe quality standards and safety precautions, and to determine safe residual limits for the application of different pesticides to various crops. Care should also be taken to ensure that the whole of an infected area is covered, for untreated pockets can be a source of reinfection to areas already covered by plant-protection measures.

43. Except for nominal charges realized from tea and sugarcane growers plant protection services have hitherto been made available free of charge to the farmers. Since these services are of direct benefit to farmers, a part, if not the whole, of the cost of plant protection operations should be recovered from them. Farmers should now be encouraged to undertake plant protection measures themselves and towards this end, spray materials and equipment should be subsidized initially. This will reduce the dependence of farmers on the free services and materials provided by the Government and permit the agricultural agencies to devote their time to the intensive educational campaigns required to acquaint farmers with the exacting nature of plant protection work. Demonstrations, lectures, and all other feasible means of communications will be necessary if farmers are to identify pests and diseases in time to take appropriate and effective plant protection measures.

44. The plant quarantine programme will also be expanded to cope with the increasing movement of agricultural produce by sea, land and air.

Improved Seed

45. Use of improved crop seeds giving significantly higher yields than the existing varieties is one of the most economical ways of enhancing agricultural

production. Emphasis was placed, therefore, on the seed programme in both the First and the Second Plans. The programme was hampered because of certain difficulties in the time consuming steps of development, multiplication, and distribution of improved varieties of seeds.

46. The Second Plan envisaged that about 50 per cent of the area under major crops would be sown with improved seed replacing the existing seed used for the purpose. The performance in this field has been rather low especially in East Pakistan. This resulted from a number of factors, including the shifting of the responsibility for the distribution of seed from one organisation to another, non-availability of nucleus and foundation seed in desired quantities and the reported lack of confidence of the farmers in the quality of the improved seed supplied through Government agencies. However, with the transfer of the seed multiplication and distribution programme to the semi-autonomous Agricultural Development Corporations in both the Provinces, the seed programme gradually showed improvement towards the end of the Second Plan period. It is expected that the Corporations will considerably improve the seed multiplication and distribution programme during the Third Plan period. This will include efforts for improving the efficiency of existing farms, through better management, better tools and the use of machinery in certain cases. Furthermore, new seed multiplication farms will be set up in new irrigation projects and also in those regions where sufficient seed farms do not already exist for seed multiplication. The foundation seed produced at these farms will be multiplied further by the registered growers who will be paid premium price. The Government will then distribute this seed to the farmers at the prevailing market price, with the difference between these two prices, along with incidentals, being borne by the Government in the form of subsidy.

47. It will be necessary for the extension staff to lay demonstration plots at the cultivators' fields and to set up model farms so that the superiority of the improved seeds over the existing varieties is clearly demonstrated to the farmers. Special arrangements will be made to ensure that the seed is made available within easy reach of the farmers well-ahead of sowing time. Table 9 shows the programme for the Third Plan giving the percentage of area of important crops that will be sown by improved seed. Although specific targets have not been laid down for "minor" crops, special attention will be paid to the multiplication and distribution of improved seed of fruits and vegetables (particularly potatoes) in both the provinces.

TABLE 9

PROPORTION OF AREA UNDER MAJOR CROPS TO BE COVERED BY IMPROVED SEED BY THE END OF THIRD PLAN

	Rice	Wheat	Maize	Gram and Pulses	Cotton	Jute	Sugar cane	Rape and Mustard
				in per cent				
East Pakistan	25	50	50	30	—	70	10	30
West Pakistan	50	55	20	40	70	—	5	20

48. In Special and Northern areas in addition to distribution of improved seeds mainly of wheat, maize, rice and potato an additional area of 10,000 acres will be brought under fruit cultivation by distribution of fruit plants among the farmers during Third Plan period. Eight new fruit nurseries will be established and the existing 9 nurseries will be improved and expanded.

49. In order to ensure that good quality seed is produced and supplied, a system of seed testing and certification is necessary. With this in view, 17 small seed testing laboratories were established during the Second Plan. This programme will be further extended during the Third Plan period, and the aim will be to analyse in these laboratories the seed produced at various levels for quality and germination so that its purity is maintained and only the certified seed is distributed to the farmers. It will also be necessary to establish laboratories which will work independently of the Agricultural Development Corporations and the Directorates of Agriculture and keep a check on the samples analysed by departmental laboratories.

50. The recommendations made in the Second Plan that all improved seed distributed for sowing should be treated with fungicides and pesticides and should be coloured to avoid its consumption as food is reiterated for the Third Plan. It is also essential that before a new variety of seed is brought on the 'approved' list, its performance be tested at the regional farms and at cultivators' fields to judge its superiority over the varieties already being used by the farmers. The seed should be examined by a Committee composed of the various agencies concerned and eminent and progressive farmers of the country.

Colonization

51. The First Five-Year Plan noted that the conversion of previously unused land into economically productive units required not only the extension of irrigation facilities, but also an effective organization for the development of land, settlement work and colonization operations. In the light of the comments in the Plan, the Government of West Pakistan appointed a continuing Land Utilization Committee which was made responsible for effective irrigation and land use. The Second Five-Year Plan further highlighted the need for increased coordination between the various Central and Provincial agencies concerned with agriculture, irrigation and land use and for developing plans for colonization well ahead of actual operations. It further suggested that Cooperative Land Management be introduced in other areas along the lines of the (former) Punjab experiment.

52. In October 1961, the West Pakistan Agricultural Development Corporation was established and *inter alia,* was given the responsibility for developing and colonizing the Ghulam Mohammad Barrage area. At a later stage the ADC also became responsible for the development of the Gudu Barrage, the Thal Project and the Taunsa Barrage areas.

53. As a result of the improvements in the operation of the colonization programmes, about 510 thousand acres were brought under cultivation during the First Plan and about 1,170 thousand acres during the Second Plan. In addition, social services and means of communication were provided to these areas, six *mandi* towns and 200 *chakabadis* were established, and 1.3 million acres of land were rectangulated. A master plan for the colonization work in the Gudu Barrage area is being made final and preparations have begun on a master plan for the Taunsa Barrage area.

54. Major efforts in the Third Plan will be concentrated on the Gudu Project, Greater Thal and Ghulam Mohammad Barrage areas, and colonization operations will also be extended to the Taunsa project. The physical targets call for development of 700 thousand acres of land, rectangulation of 1.9 million acres and for the establishment of 10 *mandi* towns and 100 *chakabadis*. In general, Third Plan public policies will aim at a reduction in the time lag between the release of land and its cultivation. Furthermore, substantial investments will be made by the settlers themselves on the purchase of land, its development, construction of dwellings and other similar expenses required for colonization operations.

Land Reform

55. Land reforms programmes carried out during the First and Second Plan periods have shown satisfactory results. In East Pakistan, the basic land reform law, the East Bengal State Acquisition and Tenancy Act of 1950, embodies four main objectives: to eliminate all intermediary rent-receiving interests; to acquire this interest for the state on payment of compensation to previous intermediary interest in instalments; to limit the area of tenancies that may be held under the state; and to distribute the land over and above the ceiling limit among cultivating families owning uneconomic holdings and landless agriculturists. Under this law all intermediary rent-receiving interests between the cultivating tenant and the State were fully abolished in April, 1956. The cultivator-tenant is assured of full occupancy rights with the right of transfer to bonafide cultivators. Emergence of rent-receiving interests in future is prevented by forbidding sub-letting. About 300 thousand acres of *khas* (self-cultivated) land were acquired by the Government under this programme.

56. In December, 1958, the East Pakistan Government appointed a Land Revenue Commission to examine the progress made in the direction of state acquisition of intermediary interests. As recommended by this Commission, in 1961 the retention limit of *khas* land was raised from about 33 acres to 125 acres. The excess area already acquired on the basis of the old limit, but not permanently settled by Government with others, was to be restored to the previous owners to the extent of the new limit. In addition, limits of subsistence and economic holdings were fixed at 3 and 8 acres respectively and their partition forbidden. But this

provision was abolished in 1964. On the basis of the report of the Land Revenue Administration Enquiry Committee, appointed in September, 1962, implementation of the comprehensive programme envisaged in the Act of 1950 will be completed during the Third Plan period except the revisional settlement operations which are estimated to take about 14 years to complete. These operations will include the adjustment of rents on a rational basis. A programme for the consolidation of holdings of 90,000 acres was undertaken during the Second Plan but this has not only been undone, but even the Land Revenue Administration Enquiry Committee has recommended that no such involuntary programme should be undertaken in any area of the Province.

57. In West Pakistan during the period preceding the First Plan, several tenancy measures were enacted, but the pace of implementation of these tenancy laws was rather slow. Therefore, a Land Reforms Commission was appointed in October, 1958. On the basis of its recommendations, a ceiling on ownership of holdings was fixed at 500 acres of irrigated land or 1,000 acres of unirrigated land except that the then owners were allowed to retain an area equivalent to 36,000 produce index units.[1] Minimum limits for "subsistence" and "economic" holdings were fixed—the former at 12-1/2 or 16 acres, and the latter at 50 or 64 acres, depending upon location; partition of economic and subsistence holdings was forbidden; *jagirdari*, or gifts in the shape of land or remission of land revenue was abolished; ownership rights on occupancy tenants were conferred and security to tenants was assured. Under this programme an area of about 2.2 million acres has been resumed on payment of compensation in instalments from owners holding land in excess of the limit prescribed under the law. About one-third of this area has already been given over to tenants on easy instalments.

58. Under the consolidation of holdings programme, 0.8 million and 7.7 million acres were consolidated during the First and Second Plan periods, respectively. During the Third Plan the programme will be continued at the rate of one million acres per year.

59. Under the West Pakistan Land Utilization Ordinance of 1960, over 300 thousand acres of uncultivated land have been brought under cultivation by owners. The Ordinance will be implemented vigorously during the Third Plan period.

60. Other measures to be followed during the Third Plan period will be the improvement and unification of legislation governing landlord tenant relations;

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(1) Produce index units generally represent the annual gross produce value of an acre of land, separately calculated according to the various classes of soil and other conditions.

rationalisation of land revenue assessment rates; and recovery of betterment taxes from the owners of land in commanded areas which have appreciated in value as a result of irrigation facilities.

61. Vigorous efforts will continue to be made in the direction of developing the area resumed under land reforms legislation in West Pakistan but not yet distributed. The new owners will be provided with necessary supporting services like credit for production needs, fertilizer, seed and other in-puts, to enable them to bring the land under cultivation as quickly as possible. Arrangements will also be made to provide adequate social services for them so that they can lead a better and fuller life in their new environment.

Agricultural Extension

62. The vital role of extension services in disseminating knowledge among the farmers cannot be overemphasized. By and large, the achievement of targets for input utilization depends on the efforts of the extension workers. These services have improved considerably during the Second Plan period, both with regard to number and quality. Of particular importance in this respect has been the freeing of extension personnel from the time-consuming task of distributing agricultural supplies. Further improvements in performance are expected during the Third Plan, particularly with regard to additional training, the provision of transport, and other amenities.

63. In East Pakistan, a field staff for extension work already exists at all "administrative" levels. Emphasis during the Third Plan will, therefore, be on bettering their quality and providing additional facilities. To improve the existing condition, the following actions are recommended:

(*a*) that the Sub-Divisional Agricultural Officers, who are not agricultural graduates be replaced gradually by agricultural graduates.

(*b*) that as many of the existing Thana Officers as is possible be replaced by agricultural graduates.

(*c*) that since "frontline contact" with the farmers is at the Union level, a proper "extension cell" be built in each Union. This cell should provide living accommodations for the Union Assistant, a place for holding meetings of farmers, and the equipment needed for extension and demonstration purposes.

64. In West Pakistan, the Directorate of Agriculture at the Provincial level has been abolished and three Regional Directorates for Extension and three Regional Research Institutes have been established instead. Under each Director of extension there exists a field staff composed of Deputy Directors, Extra Assistant

Directors, Agricultural Assistants and Field Assistants. The field assistants are agricultural school trained, while all those above them are at least agricultural graduates. The efficiency and effectiveness of this organization will be improved through the following programmes:

(*a*) Whereas services of Field Assistants are available in most rural areas, there is practically no extension staff to meet the needs of "agricultural belts" surrounding urban areas. It is necessary, therefore, that one Field Assistant along with a complementary staff, be posted for the areas covered by each of the 460 Urban Union Committees.

(*b*) At present, there is no "central" place where farmers can conveniently go to seek help and advice on agricultural matters. It is recommended that as many "agricultural development cells" at Union level as possible be constructed, with accommodations for staff, stores and a meeting place for farmers.

(*c*) Side by side with the extension workers approaching the farmers in their villages, it would be useful if groups of farmers were brought in for short periods of instruction at farmer-training centres.

65. Extension personnel cannot be fully effective unless they are technically competent and are provided with the necessary facilities and equipment to help them in their work. Provision of such facilities as transport, audio-visual aids, etc. must therefore also be considered as important goals for the Third Plan period. In addition, efforts must be made to further strengthen the recently established information service of the Agricultural Departments so as to develop attractive posters, pamphlets and other information media for use by the field staff.

66. In an attempt to bring about alround increase in agricultural production more quickly two important "experiments" were undertaken in East Pakistan during the Second Plan period. These have come to be known as the "Comilla approach" and the "Mymensingh approach". Neither of these projects has reached the end of experimentation. It is expected that many valuable lessons will be learnt from both these experiments during the course of the Third Plan period. However, before an expansion of either of the approaches, answers to some vital questions—after thorough and penetrating evaluation in case of each—are necessary. For example, it will have to be determined as to which of the two approaches is more effective when measured in terms of increasing agricultural production, what are the costs involved in each approach, and what reorganization in the present extension system and administrative set up is required?

67. The effective transmission of knowledge, whether it is in the classroom or in the field, will play an important role in Pakistan's agricultural development. With this in mind, improvements in the agricultural education system during the

Third Plan will place increased emphasis on improving communications between teacher and student and between extension worker and farmer. Such a strategy will ensure that trained agriculturists possess the skills and techniques required for leadership in an agricultural sector of ever-increasing complexity.

Agricultural Education

68. An adequate supply of properly trained technical personnel is essential for the successful implementation of the Third Plan development programmes now envisaged for the Agricultural sector. Since training and education of technical personnel takes time, it is also essential that plans be prepared with an eye on the entire Perspective-Plan period.

69. Considerable improvements and expansion took place in agricultural education and training during the First and Second Plan periods. The most important achievement was the establishment of two agricultural universities—one in each Province. The West Pakistan Agricultural University has been built by elevating the former Agricultural College and Research Institute at Lyallpur, while the East Pakistan Agricultural University has been established from the former Animal Husbandry College at Mymensingh. At the other agricultural colleges, namely, Tandojam and Peshawar in West Pakistan, and in Tejgaon in East Pakistan, teaching facilities were improved and expanded to accommodate a larger number of students. As a result of this effort, student admission rose from approximately 400 in the first year of the Second Plan period to nearly 1,000 in the last year.

70. Keeping in view the future needs, the Third Plan provides both for expansion and improvement of all existing facilities, especially in the case of the Agricultural Universities. Of particular importance will be the effort to improve the quality and standard of agricultural education and training in various agricultural universities and colleges. In addition provision is made for a new agricultural college in East Pakistan. It is estimated that during the five years of the Third Plan, a total of about 3,750 agricultural graduates and post-graduates will be produced; of these about 2,900 will be produced by the university and colleges of West Pakistan and the remainder by the Agricultural University Mymensingh and the Agricultural College, Tejgaon of East Pakistan. In addition, around 30 "students" are expected to return each to East Pakistan and West Pakistan after getting their training and education abroad. Exact estimates of requirements of various categories of staff cannot be made at this stage. Rough estimates, however, indicate that while West Pakistan will about be able to meet its requirements of agricultural technical personnel, East Pakistan will most likely face a shortage.

71. In addition to graduate and post-graduate education, lower level education and training is equally important. Including some of the former Village AID training institutes, handed over to the Agricultural Departments in both the Provinces, there exist five training centres in West Pakistan and six agricultural

schools and training institutes in East Pakistan. At present the Field Assistants training course in West Pakistan is a one-year course. In order to improve the quality of Field Assistants, the duration of their training should be increased to two years. Similar changes in pre-service training may be needed in East Pakistan. Due to the emphasis on in-service training of extension personnel in both wings, it may be necessary to increase the frequency as well as duration of such in-service training. Also, some of the existing centres will be needed for farmers' training programmes. The Plan thus provides for improvement and expansion of existing arrangements, and also for the creation of new facilities.

72. During the Third Plan period particular attention will also be paid to improving the quality and standard of agricultural education and training in various agricultural universities, colleges, schools and training institutes. This will mean selection of competent personnel having an aptitude for teaching and research, training of local teachers abroad, and even importing well qualified teachers from outside universities.

Agronomic Research

73. The long-term development of Pakistan's agriculture will depend ultimately on the ability of researchers to adapt and invent techniques and technology relevant to Pakistan. Such research is of particular importance in the development of new high-yielding varieties, and priority will be given to this and other types of agronomic research work during the Third Plan.

74. Substantial progress was made in agronomic research during the Second Plan period. With regard to facilities, three agricultural research stations at Tarnab (Peshawar), Tandojam (Hyderabad) and Tejgaon (Dacca) were upgraded to full-fledged agricultural research institutes; in addition, the Ayub Agricultural Institute has been set up at Resalewala, near Lyallpur. Results and proposed work mainly with regard to varietal improvements are summarized below.

75. *Wheat:* Two new varieties, C.566 and C.5747, have been evolved and are in their final stages of testing. These varieties have shown to have a high resistance to rust. The former is a strong stemmed plant which is capable of standing heavy doses of fertilizer and water. The latter variety is suited to the sub-montane regions and yields 3-4 maunds more per acre than present varieties. Both varieties are to be released for general cultivation during the Third Plan period. An Australian variety, Dirk, has proved suitable for the Peshawar region but still lacks high resistance to rust and smut; work on this variety will continue during the Plan Period. Two promising varieties, H.68 and T.J.558, are in the final stages of selection for the southern regions of West Pakistan. During the Third Plan work should continue on evolving higher yielding varieties especially with stiff stems which could stand the heavy use of fertilizers and those which are resistent particularly

to rust and smut and on finding high yielding varieties for barani areas. The important material obtained from Mexico for the purpose will be utilized for direct experimentation and for cross breeding work.

76. *Rice:* Research during the Second Plan developed an early variety of transplanted Aman rice (DA-31) for East Pakistan which gave substantially better performance than existing varieties. Another A.T. *Aman* variety (DA-29) was also evolved, which is suitable for medium-type saline soils. New varieties of fine rice were also tried with some encouraging results. In West Pakistan, an early maturing variety of fine rice, C-622 has been placed on the "approved' list of the Agriculture Department. Basmati 6129 is in the final stages of testing and has shown itself to be superior to the present variety. A cross-bred coarse rice has also been developed which is short statured and possesses high fertilizer response.

77. Varietal improvement efforts will be accelerated, especially in East Pakistan during the Third Plan period. More serious consideration must be given to using material and work developed in other parts of the world, especially at the International Rice Research Institute in the Philippines.

78. *Cotton:* Research work on cotton, an essential cash crop, continues to emphasize higher yields, longer staple length, and better ginning and spinning qualities. During the Second Plan period, AC-307, with a staple length of about 7/8" has been evolved, and is expected to replace several of the older varieties. In addition, improvements were made on Lasani 11 while 13/26 was released for cultivation. Research work, undertaken in East Pakistan to improve the Comilla variety of cotton, will be continued, and efforts will be made to evolve medium and long staple varieties. Further work is also being done to develop techniques for controlling root rot, boll rot and boll worm, and for determining best types and optimum doses of fertilizer.

79. *Sugarcane:* In West Pakistan, a high yielding non-lodging variety (CO-547) was evolved for the southern region. For the former Punjab and Bahawalpur areas, a superior variety (CO.L-54) was released for general cultivation and is rapidly being taken up by the growers. In East Pakistan, several Ishurdi varieties have been developed for release. Continued work is aimed at varieties with still higher yields and with greater resistance to pests and diseases.

80. *Jute:* Two new varieties, C-6 and 0-4, have been found to be superior in yield and performance and were placed on the approved list. They are now being multiplied for distribution. Results of experiments on cultural practices showed that 10 to 12 per cent higher yields could be obtained by line sowing; a new seed multiplication technique in which the tops of plants are planted was also developed. Further work on early maturing, and flood and drought resistant varieties will be emphasized during the Third Plan period.

81. *Fruits and Vegetables:* The Second Plan witnessed a significant increase in the production of sub-tropical and citrus fruits. Banana cultivation has been introduced into West Pakistan and orange cultivation into East Pakistan. A number of new varieties of vegetables and fruits have been brought on the approved list. Among them potatoes, tomatoes, peas and lady-fingers, peaches, water-melon and musk-melon deserve special mention.

Plant Introduction

82. Introduction of new crops of commercial importance was encouraged during the Second Plan. On the basis of experimental results, there appears to be good promise for cashewnut cultivation in both the provinces; mecadmia-nut and coffee plants are giving encouraging results in East Pakistan and several species of grasses and forage crops have been successfully introduced in the arid area of Quetta. The important work of plant introduction will be continued and further encouraged during the Third Plan period as it can in the long run, help to diversify agricultural production in the country.

Arid Zone Research

83. Agronomical research under *barani* conditions has been going on in West Pakistan near Rawalpindi during the Second Plan period. In order to cover all the important aspects of arid zone research a full-fledged research station will be established under the Third Plan with a comprehensive research programme covering all inter-related fields.

Soil Surveys

84. The First Five-Year Plan recommended the formation of a uniform system for soil classification, a soil-survey of the entire country on systematic lines by a single agency, and the preparation of soil maps for general use. On the basis of these recommendations, a project for conducting reconnaissance soil surveys in the country and the printing of maps for general use was developed by the Food and Agriculture Council and approved by the Government in 1960. It took some time before the initial troubles of staffing were overcome, but by middle of 1964, trial reconnaissance survey work had been completed. It is expected that by the end of the Second Plan period, an area of 2.3 million acres in East Pakistan, and 7.7 million acres in West Pakistan will have been mapped.

85. This project will continue during the Third Plan with the ultimate aim of making an inventory of all the soil resources of the country. Use will be made of aerial photographs which are already available for most parts of the country. It is expected that by the end of the Third Plan period, the whole of East Pakistan, and over two-thirds of West Pakistan will have been mapped. Such information will provide a much better base for planning the conservation of soil and water resources, and for developing irrigation and reclamation projects.

86. During the First Plan also, a "Rapid Soil Fertility Survey" was started in both Provinces to classify existing soils in terms of their fertility levels, and to examine the extent to which fertilizers could improve yields. Fertilizer trials were laid out on farmer's fields to ensure their participation and confidence and to provide recommendations that could be directly relevant for farm operations. This programme was expanded during the Second Plan, and over 10,000 trials have been carried out. It has been found, for example, that in both Provinces, the combined applications of nitrogen and phosphorous give much higher increases than when these elements are used separately.

87. During the Third Plan, this useful work will be further expanded to include a larger number of trials with different varieties, different fertilizer doses, and different moisture conditions. Study will also begin on the benefits to be obtained from the application of trace elements.

AGRICULTURAL ECONOMICS

Farm Management

88. Given the predominance of agriculture in Pakistan, information on farm management is of paramount importance as a basis for public policy and for helping farmers in their decision-making processes. During the Second Plan, studies on all Pakistan basis were developed by the Central Ministry of Agriculture. Fourteen survey areas—8 in West Pakistan and 6 in East Pakistan—were established. These farm management studies attempted to discover, how with a given set of resources farm incomes could be maximised, which farm practices could yield the most economical results and which factors caused variation in incomes on similar types of farms of the country. The ultimate objective has been to develop farm plans as models for efficient farming under a given set of conditions. A national farm management centre was also organized in 1962 by the then Directorate of Agricultural Economics and Statistics, Ministry of Agriculture, to deliberate on the problems and to improve the techniques of farm management. In addition to its substantive contributions, this centre also trained local staff engaged in farm management studies. During the Third Plan period, the scope of these studies will be expanded to include study of managerial processes and to increase the number of projects in each Province.

89. The Central Ministry of Agriculture has also started a series of economic studies in agriculture. During the Second Plan, reports were published on cropping patterns and intensities, seed requirements, utilization of agricultural commodities and the use of fertilizers. Work is currently underway on factors affecting cotton production, farm mechanization, agricultural prices and fertilizer consumption. Further expansion of these surveys during the Third Plan will include studies on the effects of tenure and type of irrigation on productivity, the economics of milk production and the economics of plant protection.

90. Formerly there was a full-fledged Department of Agricultural Economics and Statistics, under the Ministry of Agriculture and Works, which has now been amalgamated with the Cooperation and Marketing Department and renamed the Department of Marketing Intelligence and Agricultural Statistics. As a result of this integration, the importance of agricultural economics research has been adversely affected. In order to improve the situation, a Bureau of Agricultural Economics and Statistics will be established during the Third Plan period. It will be the function of this Bureau to ensure that the surveys and research in agricultural economics, so urgently needed for agricultural development planning, are effectively and efficiently carried out. The Bureau will also impart necessary training in agricultural planning techniques and methodology to the personnel directly or indirectly concerned with planning and development of agriculture.

Agricultural Statistics

91. Availability of reliable and adequate statistics is essential for sound economic planning and the formulation of appropriate economic policy. Both the First and Second Plans placed an emphasis on improving agricultural statistics and some progress was made. In particular, the provinces have improved their statistical organizations both in terms of additional personnel and their quality. A second positive factor was the establishment, in 1962 of a "National Statistical Council" with a Panel on Agricultural Statistics to study the existing situation and to make recommendations for improving statistics in all agricultural fields.

92. The Second Plan period witnessed the completion of the First Agricultural Census of Pakistan. Such benchmarks at regular intervals are urgently needed and the Third Plan provides for starting preparatory work on the Second Agricultural Census, to be undertaken in 1970.

93. Estimates of annual acreage and production of crops were improved during the Second Plan period. The number of crops for which estimates were issued was increased to include vegetables, fruits, kharif and rabi pulses and potatoes and modifications were made in the number of estimates issued for various crops. It is recommended that during the Third Plan period the coverage be further extended so that no significant crop is omitted; furthermore, the "lumping" of similar types of crops into one category should be discontinued and an estimate should be given for each major crop within the group. The accuracy of acreage estimates was also improved, particularly in West Pakistan. The Provincial Bureau of Statistics of West Pakistan has begun to tabulate mechanically the separate village data on the various crops grown by type of irrigation, etc. Unfortunately, the same facilities for collecting such data do not exist in East Pakistan. Now that the "Land Revenue System" has been reorganized, consideration should be given to setting up the same area reporting system that exists in West Pakistan.

94. A substantial part of the total land area in West Pakistan has not yet been brought under the regular crop reporting maintained by the Revenue Officials. In these regions, both the area and production figures are estimated by "eye-observation" and other rough methods by the local agricultural or other staff. In the absence of land settlement operations, information about land use patterns is badly lacking. In the short run, this deficiency can be removed by collecting the required information through sample surveys, while in the long run, "settlement" of these areas should be carried out and the necessary revenue records developed and maintained.

95. In both Provinces, estimates of production are highly subjective. The First and Second Plans both emphasized the need for improving the estimates of yield through a more objective methodology. Consequently, crop cutting experiments have been undertaken in both the provinces during the Second Plan period To date, the results of these experiments have been used only to check the figures obtained by judgement estimates. As skill with the new technique is attained, however, it will become the source of official production estimates.

96. At present, there are several sources of agricultural price statistics, none of which are strictly comparable. It is recommended that price figures be improved during the Third Plan period by:

(*a*) relating prices to specific quality grades;

(*b*) quoting prices of crops for both surplus and deficit areas;

(*c*) covering all crops of significance;

(*d*) giving prices received by farmers for all crops;

(*e*) giving wholesale and retail prices for important crops in both surplus and deficit producing areas; and

(*f*) reporting prices on a year-round basis.

97. The paucity of reliable statistics pertaining to animal husbandry is a serious handicap in agricultural planning. A quinquennial census was held in 1955 in West Pakistan, but in East Pakistan no census has been held since Independence to assess the livestock population of the Province. The Agricultural Census of 1960 has provided some data on the number of cattle, etc. though this does not fully serve the purpose. It is therefore recommended that a comprehensive livestock census be held in both Provinces in 1965 which would become the first of a regular quinquennial series. In addition, sample surveys to obtain data on the production of meat, milk, butter, eggs and other animal husbandry products should be carried out as early as possible in the Third Plan period.

98. Fisheries statistics particularly those on the inland catch, are quite unreliable. It is suggested, therefore, that periodical sample surveys be conducted on a countrywide basis to estimate more accurately, the production of fish in the country.

99. No data on forest production from private areas are available nor is there any reliable information on public forest output and on consumption of forest produce and products. In order to improve the forestry statistics, it is recommended that systematic countrywide surveys be undertaken periodically.

AGRICULTURAL CREDIT AND COOPERATIVES

100. The need for credit in the field of agriculture is paramount. With the intensified efforts to have farmers adopt improved practices, the demand for credit is growing at an increasing rate. With this need in mind, the endeavour of the Government during the last two plans has been to strengthen the institutional sources of credit and to facilitate their working so that larger numbers of farmers are benefitted by this programme. The three institutional sources through which credit is obtained by farmers are the Agricultural Cooperatives, the Agricultural Development Bank, and Government loans (Taccavi) through the Revenue or Agriculture Departments; these are described below.

Agricultural Cooperatives

101. The First Plan recommended a number of measures to rehabilitate the cooperative movement, particularly with reference to agricultural credit. Some of the more important aspects were an increase in the size of the primary society, the extension of operations in variety and volume, and the withdrawal from the field of commercial banking. The Plan further recommended that credit and marketing be linked, and that the desirability of concentrating on dual purpose societies for credit and marketing be examined. Accordingly, the Provincial Governments prepared programmes during the Second Plan for reorganization of the cooperative credit and marketing structure.

102. The Second Plan reiterated the necessity for organizing primary societies. In order to provide necessary support to such societies, it was stressed that the cooperative hierarchy should be so organized that the Central Banks and the Apex Banks have no individuals as members. The Plan further recommended that in sizeable market towns there should be a cooperative marketing society (secondary level) which would handle the produce of its constituent primary societies, as well as for their individual members.

103. Under the programme pursued in East Pakistan during the Second Plan, 500 Union (primary level) multipurpose cooperative societies and 30 Central (secondary level) multipurpose societies have been developed or reorganized, and

a Provincial Marketing Society has been established; in addition, the Provincial Cooperative Bank, 54 Central Banks and 7 Land Mortgage Banks have also been reorganized, and 9 district Land Mortgage Banks established. In West Pakistan, 500 large-size Cooperative Societies at the primary level, 65 marketing societies at secondary level and about 3,000 service societies have been organized during the Second Plan period. All the newly established or reorganized societies under these schemes are being provided with godowns. With regard to lending by cooperative institutions (at the secondary level) to individuals, cooperative banks in East Pakistan have totally stopped lending to individuals, while in West Pakistan, no substantial progress was made in this regard. The anomalous position in the old Sind area has been rectified by the merger of the Sind Regional Bank into the Sind Provincial Cooperative Bank Ltd. A rural credit fund has been constituted in the State Bank for making medium term loans and advances to cooperative banks and medium term, as well as long-term loans and advances, to rural credit agencies. This fund was initially created with a contribution of Rs. 10 million in 1961 from profits of the State Bank, but as a result of subsequent appropriations from these profits, the total accumulation in the fund at the close of 1963-64 was Rs. 35 million.

104. For speedy development of the Cooperatives, the State Bank prepared in 1962, for both the provinces, an Action Plan for a period of 5 years beginning 1963-64. Though Provincial action has been limited, care has been taken to include important aspects of these programmes in the Third Plan.

105. The credit cooperatives form the core of the cooperatives movement in the agricultural sector and will therefore, receive much greater attention during the Third Plan period. Since the basic policy is to link credit with marketing, the programme for the development of the cooperative credit and marketing structure is being evaluated for measuring performance against promise. After making necessary adjustments in it (if so warranted by evaluation results), the programme will be intensified to cover twice the number of primary and secondary societies reorganized for the purpose during the Second Plan period. At the same time all efforts will be made to improve the working of the already reorganized societies to bring them to efficient working standards. The object will be to cover through cooperative credit, the bulk of the short-term and medium-term credit requirements, leaving the long-term credit needs to be covered by the Agricultural Development Bank.

106. Experience gained from the operation of the Cooperative Farming Societies in the Montgomery and Multan Districts indicates that useful work has been done by these Societies in the direction of bringing new areas under cultivation, in increasing agricultural production, and in promoting mutual self-help in matters of community development. On the basis of this experience cooperative

farming, with the farmers retaining individual holdings, will be started in other areas during the Third Plan. However, the results of partial mechanization in the Montgomery and Multan societies, as well as the results of mechanization in co-operative societies in the Ghulam Mohammed Barrage area and those operated under the Comilla programme in East Pakistan, have yet to be fully evaluated. If the results are encouraging, similar projects will be started in other areas to accelerate the modernization and mechanization of cultivation practices. Similarly organization and development of milk producers' co-operatives with dairy plants will be encouraged.

107. Some of the main reasons for the inadequate and uneven growth of co-operative movement in Pakistan have been the lack of general and special education among the people in the co-operative movement. Therefore, along with the gradual introduction of the principles of co-operation in educational institutions, efforts to teach the principles of co-operation will be stepped up through the use of talks, booklets, films, etc., Paid Secretaries of the re-organised co-operative Societies will also carry out educational campaigns to inculcate the spirit of co-operation among the rural population. In addition, the Co-operative College and six Co-operative Training Institutes, which started functioning in West Pakistan during the Second Plan, will be strengthened. In East Pakistan, a Co-operative College and four Zonal Institutes in four Divisions have already been established, and it is proposed to increase the number of these training Institutes in East Pakistan to eight during the Third Plan period.

108. One of the main impediments to the successful functioning of the movement in both the provinces is the absence of a proper machinery and procedures for prompt recovery of co-operative dues. While these are now treated as arrears of land revenue, the actual recoveries are usually delayed quite considerably, due mainly to the dependence of the co-operatives on the Revenue Authorities for executing awards. It, therefore, seems necessary that co-operative officials should be given authority for giving awards and be vested with powers to execute them.

Agricultural Development Bank

109. The Agricultural Development Bank of Pakistan was established in 1960-61 by merging the Agricultural Development Finance Corporation (established in 1952) with the Agricultural Bank of Pakistan (established in 1957). With this merger, the scope of functions and business of the amalgamated institution has been widened and the Bank is now authorised to give loans for storage, warehousing, processing of agricultural products, bee-keeping, sericulture and cottage industry in rural areas. The number of branches, sub-branches and pay offices of the Agricultural Development Bank will have increased to 120 by the end of the Second Plan period. This programme will be further extended during the Third Plan period, and of particular significance will be the proposed line of credit

being arranged through the World Bank. The contribution by the Government in the form of share capital will increase from Rs. 100 million to Rs. 175 million during the Third Plan period, and the policy recommended in the Second Plan *i.e.*, that the Bank concentrate on long-term requirements of the farmers, will be implemented. With these policies and programmes, the ADB can be expected to render an ever-widening and improved service to its rural customers during the Third Plan.

Taccavi

110. The Second Plan recommended that Taccavi loans be made on a progressively declining scale, and be replaced eventually be institutional credit. The Credit Inquiry Commission (1959) also made the same recommendations, but they remain unimplemented. During the Third Plan, taccavi loans will be given on a relatively more restricted scale and will be confined to areas where other institutional credit services do not exist, or where the special needs of settlement in new areas and land reforms programme warrant the provision of such loans. The taccavi loans will thus be for genuine production purposes only, while distress loans and other irrecoverable loans which are really in the nature of grants will not form part of this programme. With the setting up of the Agricultural Development Bank, long-term taccavi loans under the Land Improvement Loans Act, of 1883, should no longer be provided by the West Pakistan Government.

111. Effective recovery measures for taccavi loans will be taken, especially in East Pakistan where huge arrears have accumulated. As against the First Plan actual (net) contribution of Rs. 91 million and the Second Plan estimated (net) contribution of Rs. 116 million, a sum of Rs. 121 million (net) will be utilized for taccavi loans during the Third Plan. It is recommended that each Province establish a revolving fund for taccavi loans by contributing to it the amount allocated in the Plan. The recoveries on account of taccavi loans will also be credited to this revolving fund. The need for contributions in future would cease when the fund reaches a level at which its operations become self-financing in the future.

Rural and Co-operative Credit Advisory Committee

112. A Credit Advisory Committee was established during the Second Plan by the Ministry of Finance under the auspices of the State Bank of Pakistan. It provides machinery for consultation and for co-ordination of the activities of rural credit agencies, and it is expected that during the Third Plan the work of this Committee will be continued and enlarged. It is recommended that this Committee continue to assist in the co-ordination of existing rural credit agencies, and that it also suggest to the Government ways and means for providing continuing enlargement and improvement of the credit and rural banking system for the entire agricultural economy. Specifically, it should advise on the operation and improvement of rural co-operatives, on ways and means to implement supervised

rural credit, on a co-ordinated farm commodity storage programme tied to the provision of credit to hedge prices for farmers, on financing the supply of agricultural production requisites, on marketing and processing of agricultural products and on other matters pertinent to establishing a co-ordinated rural credit policy for Pakistan.

113. In spite of the past progress, and the large programme planned for the Third Plan, credit will remain one of the most difficult problems in rural Pakistan. Increased attention will be required during the next 5 years to provide solutions which more adequately meet the banking, credit and storage needs of farmers.

AGRICULTURAL MARKETING

114. The programme for agricultural marketing discussed below includes surveys on the marketing of agricultural commodities, grading activities, and marketing intelligence work. The aim of all these programmes is to better the efficiency in the marketing system of agricultural commodities and to ensure fair prices to producers and consumers.

Market Surveys

115. Substantial changes in the responsibility for agricultural marketing surveys have taken place during the First and Second Plan periods. The Agricultural Marketing Department of the Central Ministry of Agriculture, which had previously issued a report on the Marketing of Wool in Pakistan, was reorganised and renamed as Department of Marketing Intelligence and Agricultural Statistics The responsibility for surveys was then transferred to the Provincial Governments. In East Pakistan, the work was in the hands of the Agricultural Marketing Directorate and a number of well-received surveys in various agricultural commodities have been published. The resources and responsibilities of this organization will be expanded during the Third Plan period. In West Pakistan, the amalgamation of the various Provinces and States into one unit abolished the then existing marketing organizations; since that time there has been very little activity at the Provincial level. This situation will be alleviated under the Third Plan with the establishment of an Agricultural Marketing Directorate in West Pakistan. It is recommended that the suggested Bureau of Agricultural Economics and Statistics of the Central Government supply technical guidance to the Provincial Directorates on various aspects of market surveys and analysis and carry out surveys itself of commodities important from export and with provincial point of view.

Grading

116. One of the functions of the Marketing Intelligence and Agricultural Statistics Department under the Agriculture Produce (Grading and Marketing) Act, is to develop standard grades and to promote the grading of agricultural

products. During the Second Plan, grade standards for butter and mustard oil for internal consumption and eggs, animal hair, sunhemp, coriander, and hides and skins for export purposes have been established; grading work on a number of other commodities has been started and will be made final shortly. Of particular significance are the new grading schemes that will be taken up during the Third Plan. These include the grading of rice, cotton, jute, fruits and vegetables.

117. According to the Standing Reorganization Committee Report of 1962, grading activities have been divided between the Provinces and the Central Government; the former have been given the responsibility of grading commodities for internal consumption while the latter is to deal with grading for export. This bifurcation is likely to cause difficulty and confusion through the setting up of a multiplicity of standards and grades separately by the Provincial and Central Governments. As a solution to this problem, the determination (while its implementation except for the commodities meant for export should be left to the Provincial Governments) of standard grades should rest entirely with the Central Government, leaving the task of checking and supervision with the Central Government. All work relating to the development of standard grades and also grading of agricultural commodities meant for export should be the responsibility of the Directorate of Grading to be created for that purpose in the Central Ministry of Agriculture. Such reorganisation would do away with various piece meal grading schemes, economize on personnel, and increase the overall effectiveness of the agricultural produce grading programme.

Regulated Markets

118. In order to safeguard against fraudulent practices, the Governments of the (former) Punjab and Frontier Province passed laws in the early 1940's to establish regulated markets. According to the Act, all market functionaries such as weighmen, commission agents, and brokers must be licensed and their charges must be fixed. By now, over 100 markets in West Pakistan have been brought under the purview of this Act. It is recommended that this Act be extended to all areas of West Pakistan as soon as possible. In East Pakistan, the Agriculture Produce Marketing Regulation Bill was passed by the Provincial Assembly in 1964. It envisages 54 regulated markets, one in each sub-division, which will be set up during the Third Plan period.

Marketing Intelligence

119. The Department of Marketing Intelligence and the Central Statistical Organization of the Central Government and the Agricultural Marketing Directorate of East Pakistan are issuing periodic reports and publications giving daily, weekly and monthly wholesale and retail prices of important agricultural commodities for different markets. Because of lack of consistency and uniformity in the figures quoted by these agencies and the time lag with which they are published

it is necessary that more effective co-ordination, be brought about. In addition, greater efforts must be given to the quick dissemination of information relating to acreage, production, prices and exports.

GOVERNMENT FOODGRAINS STORAGE

120. The importance of increased storage to agricultural development has long been recognized in Pakistan. A 1958 study, for example, revealed that a food-grain storage capacity of 1.5 to 2.0 million tons was required to follow the then existing Government policy of procurement and price stabilization of foodgrains. It was, therefore, recommended that during the Second Plan, an additional capacity of about 780,000 tons should be constructed. In 1959-60, however, the Government wisely revised its policy with regard to procurement and control. The changed policy called for Government action only by pumping reserves stock into the market if prices went above established ceilings, and by purchasing wheat and rice crops when producer prices went below the specified minimum level. Also at about the time of decontrol, fine rice became a major export commodity. These and other factors prompted the Government to review the food-grain policy of the country, and for this purpose, a high-level Committee was appointed in 1963. The Committee took cognizance of the various Government policies and recommended a storage programme for implementation during the coming years. It was estimated that a total of about 2 million tons of capacity were needed in the country, of which about 1.5 million tons would be completed during the Second Plan and about 0.5 million tons in the Third Plan. In addition, it was estimated that about 140,000 tons of replacement capacity would be required. Full details of the Committee's recommendations are shown in Table 10.

TABLE 10

GOVERNMENT GRAIN STORAGE CAPACITY AND TARGETS

Executing agency	Total requirements	Availability, end of Second Plan	Third Plan Target
		in thousand tons	
East Pakistan	750	639	250(*a*)
West Pakistan	644	519	125
Centre	653	433	220
Total	2,047	1,591	595

(*a*) Inclusive of 140,000 ton capacity replacement.

121. The recommendations of the Committee were further reviewed and modified by consultants to the East Pakistan Government. The firm, in its report, has recommended construction of a basic system of silo storage during the Third Plan, with a capacity of 290,000 tons. This report is presently under consideration by the Government, and a similar study will soon be undertaken for Karachi and

for the rest of West Pakistan. By necessity, therefore, firm statements about the storage programme are not possible at this time. It is expected, however, that rough magnitudes will be of the order given in Table 10.

ANIMAL HUSBANDRY

122. The condition and productivity of livestock in Pakistan, especially in the Eastern Province, are very poor, and little improvement has taken place during the past decade. In order to assure overall growth rates in agriculture which are consistent with the objectives of the Third Five-Year Plan, it is essential to improve livestock and to speed the growth of their products. Improving this large subsector, which now accounts for about 20 per cent of the entire value added in agriculture, is also important for improving the composition of diets, for supplying additional draft power and for providing hides, skins and other raw materials to the industries of Pakistan.

123. The main problems which hamper the present development of the livestock sector include (*a*) the shortages of forage and concentrate feeds; (*b*) the high rates of mortality; (*c*) the poor genetic potential for production; and (*d*) the poor marketing and processing facilities. Perhaps of most significance, however, are the broad range of problems associated with animal nutrition.

Feeds and Feeding

124. The shortage of feed and imbalanced feeding programme are the primary short-run problems in livestock production in West Pakistan. No feeding standards have been fixed so far, nor have breeders been acquainted with improved feeding practices. Hence, much emphasis must be placed on extension efforts in the field, and on increasing yields of fodder and feeds on cultivated and range land. To some extent these will occur naturally as a consequence of the significant increase in water availability. However, as a stop-gap measure, the importation of considerable amount of feedgrains under PL 480 should be considered in order to improve and increase livestock products and to increase the strength of underfed draft animals. If necessary, these feeds should be distributed at subsidized rates. It is further recommended that the East Pakistan Government engage a group of experts to make a thorough and comprehensive study of the animal nutrition problems, and to suggest a specific programme for action. Perhaps an extensive feed programme based on local rice bran, improved forage production in the hoar areas and feed grains imported under PL 480 can be worked out along with a possible reduction of the existing livestock to allow better feeding of the remaining stock.

Diseas Control

125. Losses resulting from animal diseases are very high. The productivity of affected animals is grossly reduced and the mortality rate is upped considerably

as a result of a variety of diseases and parasites. To reduce such losses, curative and preventive measures were taken during the Second Plan period. In all, 21 hospitals, 318 dispensaries, 8 mobile units and over 200 outposts were established anew in both Provinces. A programme for appointing stock assistants at the Union level was also started.

126. During the Third Plan, the intent is to set up 17 new hospitals at the sub-divisional level and 183 dispensaries at the thana level in East Pakistan. In addition, one river-boat unit for each District will be provided to meet the needs of the inaccessible areas. For West Pakistan, a total of 72 additional hospitals will be established at various levels, including 6 each in the Ghulam Mohammad Barrage and Gudu Barrage Areas. The existing network of hospitals and dispensaries will also be improved.

127. To insure continuous inoculation of animals against contageous, parasitic and other diseases, 1500 more trained Stock Assistants will be employed at the Union level in West Pakistan. Similarly, in East Pakistan, one more veterinary field assistant for every three thanas will be provided in addition to the existing staff. In the special areas 10 dispensaries will be constructed at the Union level, while one hospital, two dispensaries and one mobile unit will be provided in the Northern Areas.

Breeding

128. If livestock nutrition is improved very much, it will soon overtake the genetic potential of most of the present Pakistani farm animals. It is, therefore, of utmost importance to improve the genetic potential especially of the milk animals. Some milk cows yielding more than 10,000 pounds in a lactation period have been reported, which indicates that genetic potential for high milk production is possessed by some of the best Pakistani breeds. If necessary, some planned cross-breeding with imported breeds with high milk yields can be undertaken. As Pakistan has earlier exported its famous breeds for cross-breeding to other countries, it can likewise import in the future a good milk breed in order to improve the genetic potential of its otherwise excellent breeds.

129. The breeding programmes and the establishment of new farms were undertaken in both Provinces during the previous Plan periods and some progress has been made. Two more farms in East Pakistan will be established while 6 of the existing farms in West Pakistan will be improved and expanded during the Third Plan. In order to encourage local breeders to improve their stocks, breeding societies will be set up in areas where livestock production is concentrated.

130. The technique of artificial insemination provides great opportunities for improvement on a wide scale under a planned and controlled programme. Keeping in view the large number of bulls required, the expenses involved in the

maintenance of these animals and the difficulties in providing a sufficient number of good bulls, the only reasonable course to adopt for the cattle and buffalo breeding programme is artificial insemination. For this purpose 5 artificial centres in East Pakistan and 7 centres (with 8 sub-centres) in West Pakistan were started during the Second Plan period. During the Third Plan 65 additional centres and sub-centres in East Pakistan and 24 centres in West Pakistan will be set up.

Dairying

131. As mentioned earlier, the supply of milk and other dairy products is grossly inadequate in the country, particularly in East Pakistan. Often surpluses from milk pockets in some rural areas cannot be made available to the deficit areas of cities and towns because of the lack of transportation and preservation facilities.

132. It was recommended in the First and Second Plans that plants in such "pockets" be set up for converting fresh milk into condensed or powdered milk for the deficit areas. Very little progress has been made in this regard and therefore this recommendation is repeated. But in the meantime, a technique has developed by which milk is made aseptic, which means bacteria free, by heating milk for 2 to 4 seconds to a temperature of 150°C. This milk, if then kept in tetra paper, can be stored for about 8 weeks. This technique needs to be tried and its economics versus the recommendation mentioned earlier should be studied.

133. The shortage of milk is gradually increasing in the rapidly growing urban areas, resulting in higher prices and a deterioration of the quality of milk. To overcome the problem in Karachi, a plant was set up for reconstituting milk from imported powdered milk and toning it with fresh milk. This milk is to be supplied to the consumers after proper chilling and pasteurization. The work on this project, known as the Karachi Milk Supply Scheme, has progressed rather slowly. However, it is expected that the plant will run to its full capacity in the beginning of the Third Plan. A similar project for Lahore is being set up and this plant will start functioning during the Third Plan period. Work on the Chittagong Milk Supply scheme will also be taken up during the Third Plan period. In addition, private enterprise will be encouraged to set up milk processing plants in big cities and towns by providing necessary facilities for the procurement of equipment and technical help from abroad.

Poultry

134. Poultry development holds good prospects in the country, particularly in East Pakistan where the climatic and other conditions, in general, are favourable. To improve productivity of the local stocks, villagers must be provided with eggs and cockerels of better breeds. Productivity of the existing stock can be improved through cross breeding without introducing exotic breeds, as such, in the rural areas.

135. In following the programme on the above lines, new poultry farms both in East and West Pakistan were opened and the existing ones were improved and expanded during the Second Plan period. During the Third Plan, 6 new poultry farms to be opened in East Pakistan will be managed by the Agriculture Development Corporation. In order to encourage the poultry breeders to improve their stock, 320 poultry demonstration and extension units will be established at the *Thana* level in East Pakistan. These units will popularise the use of improved birds and will also impart training in poultry management to the villagers. In addition, 100 poultry societies will be developed in the rural areas of East Pakistan. These societies will be supplied at subsidised rates with quality birds, eggs, and incubators for promoting improved poultry practices. Records of eggs production etc., will be maintained and prizes will be awarded to the members of the most 'productive' societies. In West Pakistan, the poultry farms at Tando Mohammad Khan (Hyderabad Division) and Kheri Murat (Rawalpindi Division) will be completed. Management of the existing farms will be improved through better supervision and other measures. Eggs and birds of improved breeds will be distributed to the villagers at subsidised rates.

136. Considerable scope exists for promoting the broiler industry in the country, and during the Second Plan there was a large expansion of broiler production in the private sector. Three main factors, however, are limiting its rapid growth at present. Firstly, the supply of good quality feed has to be improved so that it is available at more reasonable prices; secondly, the price of the chicks has to be brought down to a more reasonable level by providing facilities for increased production, and thirdly, export markets will have to be found. All the necessary steps will be taken by the Government to promote this enterprise during the Third Plan period.

Sheep and Goats

137. The policy during the First two plan periods has been to expand the production of carpet wool for export and to experiment with the production of fine wool to meet the demand for domestic industries. Four new sheep breeding farms were established and two existing farms were improved for the production and distribution of rams to breeders. During the Third Plan, new farms for the production of carpet-wool and Karakuli rams will be established in West Pakistan, and the existing farms will be further expanded. A sheep and goat farm in Noakhali District will also be begun as a pilot project in East Pakistan.

Education, Training and Research

138. Successful implementation of livestock development programmes partly depends upon the availability of technical personnel. As it takes considerable time before trained personnel become available, a long term programme for training and education is necessary well in advance.

139. As mentioned elsewhere in this Chapter, two Agricultural Universities, one in each Province, were set up during the Second Plan. In addition, to the expansion of Veterinary Science and Animal Husbandry faculties of these Universities, one more college for Animal Husbandry will be set up in East Pakistan during the Third Plan to meet the growing demand of the graduates. The facilities at the Animal Husbandry College at Lahore will be further improved to accommodate a larger number of students.

140. There is also a great demand for the trained personnel below the graduate level and some of the present staff needs to be given in-service training. A Veterinary Training Institute will be set up in East Pakistan during the Third Plan for in-service and pre-service training of field assistants. In addition, selected hospitals will impart training to vaccinators, compounders and artificial inseminators. Similarly, in West Pakistan, pre-service and inservice training will be imparted to stock assistants. Scholarships will be provided for graduate study within the country and for specialised post graduate training abroad. Training facilities will also be provided for students of the special and the Northern Areas.

141. Solutions to many problems relating to animal husbandry can be found through systematic research. Properly qualified personnel and adequate laboratory and field facilities are needed for this purpose. Work has been in progress in research centres and colleges on problems pertaining to breeding techniques, causes and remedies of various diseases, animal nutrition, dairying, and other animal sciences.

142. During the Second Plan period, a Veterinary Research Institute with laboratory facilities for the diagnosis of diseases, and for manufacture of biological products was established at Lahore. Establishment of the CENTO Institute for Animal Reproduction was completed at Malir.

143. Research facilities will be further expanded during the Third Plan period. A Research Institute with well-equipped laboratories for important branches of the Veterinary Science will be set up in East Pakistan near Dacca. The Institute will also have facilities for manufacturing of biological products. In West Pakistan, additional facilities will be provided both at the Veterinary Research Institute, Lahore and at the Livestock Research Institute, Bahadurnagar. In addition, diagnostic laboratories will be set up almost in all of the Divisions of both East and West Pakistan.

Other programmes

144. Modern abattoirs which are in the process of being established at Karachi, Islamabad and Dacca will be completed during the Third Plan. Similar facilities will be provided in several big cities of both the Provinces under the private and public sector.

145. The Zoological Garden at Lahore would be further developed and the one at Dacca will be completed during the Third Plan. In addition, a Zoological Garden will be set up at Islamabad.

RANGE MANAGEMENT

146. Vast areas of land in West Pakistan lie waste because inadequate rainfall does not allow raising of arable crops without irrigation. A major portion of these lands could, however, serve as productive range lands. Based on surveys and experiments conducted during the First Plan, 15 demonstration areas with a total coverage of about 175 thousand acres were started during the Second Plan. In addition, another project, consisting of 25 demonstration areas, was started in the Kohistan area in 1964-65. These areas have demonstrated a variety of range-management practices.

147. The pilot phase of the range development programme has amply indicated the feasibility and potentialities of undertaking a major range development programme in West Pakistan and it is planned to take up an area of 4.2 million acres for range development during the Third Plan. In the Northern Areas, pasture improvement work will be undertaken over 10 square miles and experimental work started on exotic fast growing grass species and local grasses. In addition, a Range Research Laboratory will be established in West Pakistan to undertake research on range plants and management.

148. Success of the major range development programme of the Third Plan will depend primarily on the supply of personnel adequately trained in range management. It is, therefore, recommended that range management be introduced as a full-fledged subject in the curricula of the agricultural colleges. Considering the time required for training, this matter should receive immediate attention. Secondly, it is recommended that serious consideration be given to the creation of an independent Range Management Service within the Agriculture Department so that the necessary trained personnel may be attracted to the programme.

149. According to the declared Government policy, all dry areas of Quetta, Kalat, Karachi, Hyderabad, Khairpur, Bahawalpur and Sargodha Divisions, where large-scale crop production is not economical, should be reserved for increased and improved livestock production; however, this policy has not been fully executed. Such areas should be transferred expeditiously to the Government agency charged with the task of range development, and priority should be given to developing the most promising areas where quick results in the form of increased livestock production can be expected. The areas where the local people exercise certain rights, including those of grass cutting and grazing, can be declared as "protected forests," without prejudice to the existing rights of the local people.

150. The operational range management programme will be a programme largely for the benefit of the local livestock owners whose full participation will be repuired in the formulation and operation of the management plans at all stages

To arouse their interest and participation, demonstrations, along with other usual means of extension such as personal contacts, leaflets, press and audio-visual devices, should be undertaken.

151. Efforts should be made to have some range lands developed through the allocation of land to private parties. Consideration should be given also to providing the allottees with credit facilities, assistance in exploration of underground water and the sinking of tubewells, the provision of technical know-how for livestock rearing and pasture-development, the provision of medical and veterinary facilities and other normal facilities needed for settling people in new range lands.

FISHERIES

152. The importance of fish as a source of animal protein for human consumption cannot be overstated in a country where large deficits exist in the protein content of the average diet. In addition, fish is a substantial item in Pakistan's exports, thus contributing to the availability of scarce resources for development. Rapid expansion of the fisheries sector is, therefore, important and attractive.

153. The country has a considerable potential for the expansion of fisheries. Both inland and marine fisheries are important sources of fish production, although the exact magnitudes are not easily obtainable because of the lack of accurate statistics particularly on the inland catch. These potential sources are only partially exploited at present and, therefore, leave much scope for further expansion.

154. During the First and Second Plans the basis was laid for a programme of accelerated growth of fish production, especially in the case of marine fisheries. In East Pakistan, an increase of 27 per cent is projected against an estimated 18 per cent growth during the Second Plan, whereas for West Pakistan, a 56 per cent increase over the Third Plan compares with an estimated growth of 30 per cent over the Second Plan. In overall terms, a 35 per cent increase of fish production is projected, compared to 21 per cent gain over the last five years.

Table 11 shows fish production in recent years and projections for the end of the Third Plan by regions and sources.

TABLE 11

FISH PRODUCTION IN 1959, 1964 AND TARGETS FOR 1969

	1959	1964	1969	Increase between 1959-64	Increase between 1964-69
	in 'thousand' metric tons			*in per cent*	
East Pakistan	218	257	327	18	27
Inland (*)	181	217	264	20	22
Marine	37	40	63	8	58
West Pakistan	73	95	148	30	56
Inland	16	19	31	19	63
Marine	57	76	117	33	54
All Pakistan	291	352	475	21	35
Inland	197	236	295	20	25
Marine	94	116	180	23	55

(*) Data for inland fisheries in East Pakistan are quite unreliable, and give considerably lower total than shown by the 1963 Nutrition Survey of East Pakistan.

155. The programme for the Third Plan will mainly be an expansion and continuation of the programmes initiated and implemented during the preceding Plan period. The private sector will remain the major instrument through which the production targets will be achieved, and the Government will confine its activities mainly to surveys, exploration, research, training and the provision of improved market facilities. In East Pakistan, the recently established Fisheries Development Corporation is expected to play an increasingly important role in the development of the fish industry.

156. With regard to marine fisheries, an important administrative problem was encountered during recent years in carrying out the development programme. According to the Government decision, the Provincial Governments are responsible for the development activities in the territorial waters, while in waters beyond that limit, responsibility rests with the Central Government. This boundary for the fishing fleet is rather artificial, however, and an early decision is required entrusting the responsibility for marine fisheries either to the Provincial or to the Central Government.

Inland Fisheries Development

East Pakistan

157. One of the major programmes carried out during the First and Second Plans was the reclamation of derelict water areas for fish production, covering an area of 14,500 and 23,500 acres, respectively. These areas, after being reclaimed, are developed over a period of three years and then handed over to the Revenue Department which leases them to the highest bidders. The latter, in turn, sublease or engage fishermen for catching fish. Thus far, however, there has been a tendency to prefer maximum immediate benefit over optimum long-term exploitation. This has resulted into turning a number of reclaimed and developed water areas again into derelict ones. Consideration should be given during the Third Plan, for improving the present situation through the Fisheries Directorate or the Fisheries Development Corporation. Provision has been made to expand the reclamation and development programme over an area of 75,000 acres of derelict waters.

158. The supply and quality of fry and fingerling of fish were improved through 36 nurseries which began operation in 1961. In addition, 51 seed multiplication farms—one in each sub-division—are expected to be in operation by the end of the Second Plan. In an effort to improve the supply further, an additional 150 fish seed farms will be started during the Third Plan. In addition, the programme for the establishment of fish sanctuaries will be considerably expanded and commercial exploitation of the Karnaphuli reservoir will also be initiated.

West Pakistan

159. With the establishment of the Fisheries Directorate in 1958 development activities gained momentum. Fish cultivation was initiated at Warsak Dam.

Kalri Lake and many reservoirs, ponds and tanks, and the culture of trout fish was begun in Chitral and Swat States. In order to protect the stock of inland fish, the Fisheries Ordinance of the former Punjab Province was extended to the entire Province (except Special Areas) by the end of 1961.

160. The Third Plan provides for further expansion of fisheries development programme in the Province. Activities undertaken in Kalri Lake and Warsak Dam will be intensified and extended to Uchhi, Namal and other lakes, and to Rawal, Mangla and Baran Dams. Programmes for the utilization of abandoned canals, the reclamation of derelict water areas and development of village ponds for fish production will be taken up during the Third Plan. In order to keep the cost low, local labour should be used for any digging work required for the purpose. The programme of development of trout fish begun on a small scale will be extended to the Special and Northern Areas during the Third Plan. Furthermore, a survey will be undertaken to explore the possibility for cultivation of other species in these waters.

Marine Fisheries Development

161. In 1956, only 73 mechanized marine vessels were in operation; however, by the completion of the Second Plan it is expected that about 600 vessels will be engaged in marine fisheries, mainly as a result of large private investments. The further expansion expected during the Third Plan is of the order of 1,000 new launches and trawlers. Emphasis will be on the construction of larger vessels for exploiting offshore fisheries and for fishing during all of the year. Further, mechanization of existing boats will be stimulated, and the private sector will be encouraged to invest in marine fisheries development through incentives, credits and the provision of fishing materials through cooperative societies. Provisions are also made in the Plan to provide repairing facilities for both crafts and fishing gears.

Market and Storage

162. Increasing fish production without ensuring its efficient disposal would diminish the investment return. During the First Plan, measures were taken to provide market facilities by constructing the Karachi fish harbour which will be completed by the end of the Second Plan. A survey has been completed for selecting a site for construction of a fish harbour around Chittagong in East Pakistan which will be constructed during the Third Plan. Another fish harbour will be established on Mekran Coast during this period.

163. Wholesale fish markets, with cold storage and ice plants, are being set up in East Pakistan at important centres. A cold storage and ice plant has been established at Pasni in West Pakistan and the Third Plan programme includes sufficient expansion of these facilities. Due attention will be given also to the provision of transport, trade and curing facilities.

164. Difficulties were being experienced in the implementation of the fisheries development programme of Mekran coast because of lack of coordinated efforts of the departments concerned with developing the area. Necessary coordination with relevant departments will be sought to tie the harbour development at the Mekran Coast with the overall development programme for that area.

Research and Surveys

165. Exploratory surveys have so far been limited to inshore waters, but during the Third Plan this work will be intensified and extended to offshore waters. This work will provide information on the location of fishing grounds, the movement of fish and the prediction of fishing seasons. In East Pakistan a pre-investment study for the development of fisheries started during the Second Plan will be completed during the Third Plan. The station and laboratories at Chandpur in East Pakistan and Chennawan and Karachi in West Pakistan will be expanded during the Third Plan and will continue their work on fresh water and marine fish. This research will include the culture of sea fish on inland saline waters, cultivation of prawns and the analysis of seasonal variation in demersal and phelagic stocks.

Training and Extension

166. While some training facilities were created during the Second Plan for different levels of training, these will be further expanded so as to maintain pace with the development of the fisheries sector. Two institutes one in each province, will be established during the Third Plan for training master fishermen and marine engineers. To intensify the work of demonstrating improved methods of fish cultivation, new extension staff will be appointed at the *thana* level in East Pakistan.

167. The comprehensive fisheries development programme outlined above calls for a maximum private and public effort. Its success, however, will mean substantially improved diets and increased foreign exchange earnings.

FORESTRY

168. Forests play a vital role in Pakistan's economy. They supply timber and fuel wood, provide protection against soil erosion and floods, and provide raw material to the furniture, paper, rayon, plywood, matches, sporting goods, resin, and tanning industries.

169. Less than 4 per cent of the total land area of Pakistan is termed as "forests".[1] However, only about half of this is capable of producing timber or firewood, while the rest consists of scrub-forests, pastures or waste lands. The

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[1] Relates to "any land classified or administered as forest under any legal enactment (Forest Act, 1878) dealing with forests." In case of East Pakistan, this also includes unclassed state forests.

"forested" area in East Pakistan is about 16 per cent of its total area while it is less than 2 per cent in West Pakistan.

170. The existing forests are grossly insufficient to meet the country's demand for timber and fuelwood and at present the country is a net importer of timber worth over Rs. 40 million annually. The demand for wood is growing rapidly with the increase in population, the expansion of industries, and the colonization of new areas. Both the First and the Second Plans, therefore, placed considerable emphasis on afforestation in West Pakistan and timber extraction in East Pakistan, along with the inventory surveys of forest resources and preparation of working plans in both the Provinces.

Extraction and Utilization of Timber and Minor Forest Products

171. Considerable progress has been made during the first two Plan periods in afforestation, timber extraction, forest management operations and in other forestry programmes. The Chittagong Hill Tracts and the Sunderban areas contain the bulk of the country's deciduous forests. In an attempt to narrow the gap between the demand and supply of timber in the country, the target of timber extraction from the forests of the Chittagong Hill Tracts in East Pakistan was placed at 152,000 tons during the Second Plan period; however, only about 120,000 tons of timber was extracted, mainly because of the delay in procuring machinery. To meet the increasing demand for wood, the rate of timber extraction will be accelerated both in East and West Pakistan during the Third Plan, with due attention being given to regeneration of the cut-over areas. It is expected that by 1969-70, the annual production of timber and poles from the East Pakistan forests will be about 600,000 tons against the present level of 450,000 tons. The main increase will come from the forests of the Chittagong Hill Tracts where the annual extraction programme by mechanical means will be expanded from 4,000 acres to 11,000 acres to increase the annual extraction from 35,000 tons to 100,000 tons of timber by 1969-70. Timber extraction in the Sunderban forests, undertaken as a normal activity of the Forest Department, will also be stepped up. Installation of the Chittagong Hill Tracts saw mill at Kaptai will be completed, and this mill will convert 25,000 tons of logs annually on two-shift basis. In West Pakistan, extraction work will be started in the comparatively untouched forest areas in the states of Dir, Chitral and Swat. Extraction of such minor forest products as resin, *'gugul'* *mazri* and Ephedra will be stepped up in West Pakistan and surveys will be undertaken to determine and encourage exploitation and development of other medicinal plants in both the Provinces.

Regeneration and Afforestation

172. As mentioned earlier, the afforestation programme was especially emphasised in West Pakistan during the Second Plan period. A total of 340,000 acres were afforested in both the Provinces during this period; of these 280,000

acres were in West Pakistan. In addition, about 2,600 miles of canal-side, 1,600 miles of road-side, and 350 miles of railroad-side were planted in West Pakistan.

173. The present emphasis on establishment of new forest plantings and rehabilitation of the existing forest areas will continue. In East Pakistan, approximately 80,000 acres of waste land located mainly in the Chittagong Hill Tracts and the Districts of Chittagong, Dinajpur and Rangpur will be afforested while over 40,000 areas of the cut-over areas in the Chittagong Hill Tracts will be regenerated. In addition, 16 permanent nursery centres will be established to provide seedlings as planting stock while 300 miles of road-sides will be planted. The programme also includes afforestation of 13,000 acres in the coastal-belt area and the off-shore islands along with protection of 37,000 acres.

174. Rubber plantings were successfully established over 3,000 acres in East Pakistan during the Second Plan period and a part of the planted area will be tapped during the Third Plan. In view of the encouraging results in the past, and to help further meet the country's requirements of natural rubber, rubber planting will be extended to over 10,000 acres. Similarly, plantings for '*bidi*' leaves on over 5,000 acres will be undertaken. In addition, such economic species as oil-palm cocoa, kapok, etc. will be planted over 2,000 acres in East Pakistan.

175. In view of the increase in population and the expansion of industries and of colonization of new areas, the future demand for forest produce, particularly for timber and firewood will multiply. The supply, however, is not likely to increase appreciably unless an extensive forest planting programme is undertaken promptly in West Pakistan. Only a small area located in the Rawalpindi and Peshawar Divisions receives adequate rainfall for good tree growth. Therefore, in addition to hill afforestation wherever possible, establishment of irrigated plantations on a limited scale and the afforestation along rivers, canals, roads, and railroads appear to be a practical answer for helping meet the present and future wood demands. During the Third Plan period the programme is to plant 82,000 acres under irrigated conditions, 200,000 acres of hill areas, and 75,000 acres of riverine areas while linear planting will be undertaken along 15,000 miles of canal-side, 3,800 miles of road-side, and 600 miles of rail-side strips. Planting of wind-breaks will also be taken up in the Ghulam Mohammad Barrage area.

176. Small scale planting of sisal—a valuable plant for fibre used mostly for manufacture of ropes and binder twine—showed promising results in the Pabbi Hills of West Pakistan. During the Third Plan period, about 1,000 acres of sisal will be planted and about 5,000 acres of walnut plantations will be undertaken. Establishment of forest nursery centres over 2,000 acres in West Pakistan will also be necessary to provide seedlings for carrying out the afforestation programme.

Watershed Management

177. The misuse of centuries has denuded a large part of the hill catchments, which poses a serious problem of silting of dams built at huge costs. To rehabilitate and stabilize the badly eroded hill lands within the Mangla Dam Watershed

area in the Murree Hills and to preserve also the remaining forest areas in the vicinity, the Bhurban pilot demonstration project covering about 13 thousand acres was started in 1963. The programme of work in that project area involves prohibition of cultivation of lands above 50 per cent slope and planting thereof with fruit trees. Efforts are also aimed at elimination of and compensation for the existing inherent rights of the local people in the forest area. Considerable area has already been taken out of cultivation and planted with fruit trees while kerosene oil has been distributed free to the right holders so that it is unnecessary to cut trees for firewood. The demonstration project for rehabilitation of the Bhurban tract of the Murree Hills will be continued and systematic water shed management on over 200 square miles will be undertaken.

Forest Management and Improvement Operations

178. To improve management including exploitation of forests, 600 miles of new forest roads and 900 new buildings were constructed and 160 miles of old roads and 155 old buildings were repaired and improved in both the Provinces during the Second Plan. In addition, inventory-surveys of the Chittagong Hill Tracts and the Sunderban forests were also completed. For the Third Plan, 250 miles of new forest roads and 900 new buildings will be constructed in East Pakistan. A forest inventory-survey of the Dacca and Mymensingh forests will also be undertaken while 3,500 miles of forest boundary will be surveyed and demarcated in East Pakistan. Housing, medical and educational facilities for the forest staff in areas where they are badly needed will also be provided in East Pakistan.

179. Similarly, in Northern-West Pakistan, (Chitral, Dir, Swat and Indus Kohistan) an aerial forest inventory and land-use survey extending over 14,000 square miles will be completed. The information obtained from this survey will form the basis for systematic management of these important forest areas. Special attention will be paid to the preparation of working plans which will constitute an essential operating base for forest management. During the Third Plan, 20 new working plans will be prepared and 6 old ones will be revised particularly with a view to maximizing forest produce.

180. Some pests, particularly the *Shisham* defoliator and powder-post beetle are causing damage to the growing trees in the irrigated plantations and fuel stocks, respectively. About 150 thousand acres of these plantations will be treated against the defoliator. In addition, fire protection measures will be taken over 50,000 acres in West Pakistan. To improve communications for facilitating extraction and management, 350 miles of new forest roads will also be constructed in West Pakistan.

181. Prior to July, 1963, the West Pakistan Forest Department was headed by a Chief Conservator of Forests, but subsequently the Province was divided into five forest regions. This reorganisation of the Forest Department has weakened or

eliminated the central co-ordination and control which are so essential to planning and development. The present organisation, therefore, needs to be carefully examined and central co-ordination and even control restored if the tempo of development in this field is to be accelerated.

Forest Education and Research

182. Training and research facilities were expanded and improved during the Second Plan, particularly at the Pakistan Forest Institute, Peshawar and the Pakistan Forest Research Laboratory, Chittagong. At the Institute, 110 Rangers, 61 Superior Forest Service students were trained and various research projects were completed at its various branches. In addition, research work on the utilization of various timber species of East Pakistan was undertaken at the Forest Research Laboratory. Further studies will proceed on the seasoning and strength properties of various species, and on the suitability of indigenous species for veneering, tea chests, matches, pulp, pencils, furniture and other uses. During the Third Plan, silvicultural and wood utilization research will be intensified in both the wings of the country. Special emphasis will be laid on work of acclimatization of exotic species, particularly those of short rotation, and those which may be grown in water-logged, alkaline and dry areas. Further work will also proceed on the irrigation water requirement of forest crops, and on the classification of the forest areas as to their economic possibilities.

183. In order to meet the requirements of technical personnel, the existing training and educational facilities will be strengthened. The Provincial Governments have estimated that an additional 70 Superior Forest Service Officers, 300 Forest Rangers, 230 Deputy Forest Rangers, and 950 Foresters will be needed to carry out the expanded forestry development programmes. These requirements will be met by expanding the existing training facilities. The facilities at the East Pakistan Forest Ranger College, Chittagong started during the Second Plan will be strengthened to produce 15 Rangers annually while the capacity of the Forest School at Sylhet will be raised from 45 to 60 Foresters annually.

Forest Recreation

184. The botanical garden and the Baldah garden at Dacca will be improved while the facilities at the game sanctuary in the Chittagong Hill Tracts, and the national park at Modhupur will be expanded. A new national park at the Kalri Lake will be established in West Pakistan.

Forestry in the Special and Northern Areas

185. Forests constitute by far the most important resource of Azad Kashmir, but to date, the forest wealth of this area has not received the proper attention it deserves. Even estimates of forest area and the growing stock are not available with a reasonable degree of accuracy. In order to overcome some of the acute

forestry problems in the Special and the Northern Areas including those of private encroachment on forest areas for crop production, programmes for demarcation, afforestation, closures and construction of buildings for staff were undertaken during the Second Plan period. About 8,000 acres of the demarcated forests were closed and partly afforested, while 60 miles of road-side were planted in addition to construction of buildings for office and staff in the Special Areas. In the Northern Areas, 12,000 acres were afforested and 500 acres of the forest areas were closed.

186. During the Third Plan, the forestry development programme in the Special and Northern Areas will be further expanded along the lines followed during the Second Plan. Three new demarcation divisions will be opened in the Special Areas, and about 11,000 acres in the Special Areas and 24,000 acres in the Northern Areas will be afforested. To facilitate timber extraction in the inaccessible areas, 3 units of rope-ways will be installed and 45 miles of forest roads will be constructed in the Northern Areas. One forest research division in the Special Areas and one forest research station in the Northern Areas will also be established to undertake silvicultural research, including preparation of volume and yield tables and trial of exotic species.

SOIL CONSERVATION

187. Soil erosion is a very serious problem in Pakistan. In West Pakistan it has been estimated that nearly 80 per cent of the total 200 million acres suffers from water and wind erosion in various degrees. In East Pakistan, water erosion is largely confined to the Chittagong Hill Tracts.

188. During the previous Plans, suitable soil conservation measures and practices were developed and demonstrated to farmers. In West Pakistan, fifteen demonstration areas have been set up covering 180,000 acres. Only preliminaries of soil conservation work were undertaken in East Pakistan during the Second Plan period, where two demonstration areas were started.

189. The experience gained during the past ten years in the area of soil conservation will be applied vigorously during the Third Plan. In the Soan Valley area, conservation work will be taken up on about 1.9 million acres in the districts of Rawalpindi, Jhelum, Campbellpur, Mianwali and Sargodha. About 200 thousand acres of virgin lands will be reclaimed for farming and about 900 thousand acres will be improved through building of embankments and levelling, and another 800 thousand acres will be improved through gully plugging and terracing. Under the Soil Conservation Operational Project, an additional one million acres will be covered in the Districts of Rawalpindi, Hazara, Campbellpur, Jhelum and Gujrat. Under this project, 100 thousand acres of virgin land will be reclaimed and 650 thousand acres will be improved through building of embankments, local levelling and construction of disposal outlets. Gully plugging will be carried over 133 thousand acres and 1,000 acres of severely eroded and gullied lands will be reclaimed

through especially developed blasting technique. About 50 thousand acres will be covered by range improvement and afforestation work and 3,600 ponds will also be improved.

190. Soil conservation work started in the Special Areas during the Second Plan, will be extended during the Third Plan. Five demonstration areas covering about 11,000 acres will be established in the Special Areas and two demonstration areas covering about 4,000 acres will be started in the Northern areas.

191. Past work in soil conservation has been hampered by the lack of equipment, foreign exchange, and technically trained personnel. The success of the soil conservation programme for the Third Plan hinges on the ability to remove these obstacles. Needed equipment must be procured and technical personnel recruited. To meet the personnel problem, it is suggested that an independent Soil Conservation Service in the Agriculture Department be created to bring together the various disciplines concerned with conservation work. This service should provide a salary scale and other amenities on a par with other similar services. It is only by providing permanent jobs with good future prospects that specialists will be attracted to this field.

192. In East Pakistan, more intensive research and demonstration work in Soil Conservation will be undertaken in the two existing demonstration areas.

FINANCIAL ALLOCATIONS

193. The financial allocation for the massive agricultural development described in this Chapter totals Rs. 8,670 million. This sum, which is composed of the Rs. 4,670 million public programme shown in Table 12 and a Rs. 4,000 million private programme, represents about 17 per cent of the total Plan allocation. With the planned programmes and policies, these funds will allow the fulfilment of the 5 per cent growth projected for agriculture. It is to be noted that this figure relates to direct investment in agriculture and there are other large investments in industry, irrigation, power, transport and communication which though they relate to agriculture, have not been reckoned against the allocation for Agriculture. It is logical that the greatest emphasis and the largest allocation of resources should be for agriculture on whose development depends the prosperity and well being of the whole nation.

TABLE 12

NET FINANCIAL ALLOCATIONS IN THE AGRICULTURE SECTOR FOR THE THIRD PLAN

(Million Rupees)

Sub-sector	East Pakistan	West Pakistan	Centre	All Pakistan
1	2	3	4	5
PUBLIC SECTOR PROGRAMME				
1. A.D.C. (surveys and project areas, etc.)	177.27	27.00	...	204.27
2. Manure and fertilizers	484.20	677.70	5.28	1167.18
3. Plant protection	264.06	230.00	161.88	655.94
4. Seed multiplication and distribution	39.38	47.98	2.74	90.10
5. Mechanization	351.31	213.74	—	565.05
6. Soils	7.50	10.55	9.38	27.43
7. Agricultural economics and statistics	2.94	2.50	15.23	20.67
8. Agricultural marketing	14.19	6.10	10.00	30.29
9. Agricultural extension	40.59	105.02	23.30	168.91
10. Agricultural Research	38.42	47.20	48.68	134.30
11. Agricultural education	72.99	42.71	0.40	116.10
12. Soil conservation	2.12	105.00	3.60	110.72
13. Government foodgrain storage	153.16	24.50	46.17	223.83
14. Colonization	—	117.35	—	117.34
15. Animal husbandry	86.28	111.78	3.59	201.65
16. Range Management	—	20.87	0.10	20.97
17. Forestry	139.29	196.40	13.14	348.83
18. Fisheries	109.29	90.38	35.56	235.23
19. Land reforms	2.43	10.00	—	12.43
20. (*a*) Cooperatives	57.07	78.33	—	135.40
(*b*) Cooperative farming on Comilla basis	49.61	—	—	49.61
21. Miscellaneous	—	27.00	6.50	33.50
Sub-total:	2092.10	2192.10	385.55	4669.75
22. Capital liability on government account				
(*a*) Cooperatives (net)	120.00	100.00	—	220.00
(*b*) Agricultural credit (taccavi net programme)	80.00	40.00	1.00	121.00
(*c*) Share capital contribution to Agricultural Development Bank	—	—	75.00	75.00
Grand total:	2292.10	2332.10	461.55	5085.75

through [illegible] developed. Stratified technique, about 50 thousand acres will be covered by [illegible] and 1,400 [illegible] also be [illegible]

[illegible] Special Areas during the [illegible] will be [illegible] Special Areas and [illegible] demonstration [illegible]

[illegible] soil conservation has [illegible] foreign [illegible] and technically trained personnel. The success of the [illegible] programme for the Third Plan [illegible] on the [illegible] equipment must be procured and technical [illegible] Service in the Agriculture Department be created to [illegible] concerned with conservation work. This service should [illegible] other amenities on a par with other similar services [illegible] permanent jobs with good future prospects [illegible] assigned to the field.

[illegible] In East Pakistan, [illegible] research and demonstration work [illegible] will be undertaken in the two existing [illegible]

FINANCIAL ALLOCATIONS

[illegible] The financial allocation [illegible] in this Chapter [illegible] Rs. 4,670 million. [illegible] of the Rs. 4,670 million public programme shown in Table 12 and [illegible] million private programme, represents about 17 per cent of the total Plan [illegible] with the planned programmes and policies, these funds will allow the [illegible] per cent growth [illegible] It is to be noted [illegible] there are other large [illegible] have not been reckoned against the allocation for [illegible] It is logical that the greatest [illegible] for Agriculture on whose development depends the progress of [illegible]

CHAPTER XXI

INDUSTRY

Introduction

1. The growth and diversification of the industry in Pakistan has been remarkably rapid. At the time of Independence, Pakistan had virtually no industry. In 1949-50, two years after Independence, the contribution of the manufacturing sector to the Gross National Product was 7 per cent, mostly from small industries. The contribution of large scale industries to the G.N.P. was only 1.5 per cent. Over the past 15 years, large scale industry has been growing at an average rate of almost 15 per cent per year and by 1964-65, the contribution of large scale industry is expected to increase to 7.4 per cent and of the manufacturing sector as a whole to 11 per cent of the G.N.P. In absolute terms the contribution of industry to G.N.P. (in 1959-60) will almost treble, from Rs. 1,433 million in 1949-50 to Rs. 4,440 million in 1964-65.

2. As a result of this impressive rate of growth in Industry there has been a significant increase in the production of all major consumer goods and some capital goods. The production of cotton textiles, for example, has increased from 90 million yards in 1948-49 to 730 million yards by 1963-64, of jute manufactures from almost nil to 300 thousand tons, of cement from 330 thousand tons to 1,475 thousand tons, of white sugar from 30 thousand tons to 271 thousand tons, of vegetable oils from 60 thousand to 200 thousand tons and of cigarettes from 240 million to 16,000 million. At the time of Independence, Pakistan had no facilities for the domestic production of fertilizers, paper, newsprint, wires and cables, steel or any other heavy industries. A beginning has been made in all these fields during the Second Plan period. By the middle of 1965 fertilizer production is expected to be 550 thousand tons, which will meet about 55 per cent of the requirements of nitrogen fertilizers. An anticipated production of 30,000 tons of paper will meet almost the entire demand for writing paper, while the newsprint and mechanical paper production of 56,000 tons will leave a surplus of at least 10,000 tons for export. The domestic production of certain chemicals, such as Soda Ash, Caustic Soda, and Sulphuric Acid has started and the first steel plant with a total ingot capacity of 150 thousand tons is expected to go into production at Chittagong during 1965-66. The construction of another larger steel mill at Karachi with a capacity of 500,000 ingot tons is also expected to commence in the first year of the Third Plan. Plans for the production of heavy engineering equipment, electrical equipment, machine tools and petro-chemical in both the Provinces are in an advanced stage of formulation and implementation.

3. In financial terms, the Second Plan had allocated Rs. 5,120 million or 22 per cent of the total Plan outlay to industries, Rs. 1,460 million, in public sector

and Rs. 3,660 million in the private sector. Actual estimated investment is expected to be Rs. 1,500 million in the Public Sector and about Rs. 4,300 million in the Private Sector and will exceed the Plan allocation by about 13 per cent.

4. During the period under review, several measures have been adopted to accelerate the growth of industries. The import policy has been liberalised gradually to meet the growing needs of industries; increasing allocations have been earmarked for the import of machinery, spares and raw materials. Tax holiday ranging from four to eight years has been granted for new industries. Price and distribution controls have been relaxed. Incentives have been provided in the shape of "export bonus scheme" and "export credit guarantee scheme" to stimulate production and export. Facilities for profit and capital remittances have been guaranteed for creating a favourable climate for foreign private investment. Avoidance of double taxation agreements and investment treaties have been concluded with a number of countries. Credit facilities, both in local and foreign currencies have been made available liberally through the Industrial Development Bank of Pakistan, the Pakistan Industrial Credit and Investment Corporation, and other organisations to accelerate industrial development. A National Investment Trust has been set up to channel small savings into industrial investment. A number of technical institutes have been established for the supply of skilled manpower; tariff protection has been granted to selected industries; and basic facilities, such as land, water and power, have been provided by establishing industrial estates at different places. Private enterprise in the country has now acquired a measure of experience and know-how which qualifies it to expand its operation independently and in collaboration with foreign investors.

5. Projects for which adequate private capital was not forthcoming, technologically complex industries or projects which were to be established as pioneer units were taken up in the Government financed sector. The Pakistan Industrial Development Corporation, which was the principal agency for industrialization in the public sector was bifurcated in 1962 into two Provincial Corporations as a result of the decentralization policy of the Government. Both the Provincial Corporations have been fully reorganised and are now ready to undertake a much bigger industrial programme during the Third Plan.

6. The rapid expansion of industrial capacity has resulted in a substantial increase in industrial output; self-sufficiency has been attained in a large number of consumer goods and the production of many capital goods has increased significantly. During 1963-64 the index (1959-60 = 100) of large-scale industrial production increased to 165. Total industrial production is estimated to increase by more than 50 per cent over the Second Plan period.

7. Some of the industry is at present less productive than the same industry with the same machinery in many of the developed countries. A substantial under-

utilization of capacity exists through failure to work multiple shifts; for lack of adequate supplies of raw materials, power, technical and skilled manpower, replacement parts, and for failure of industrialists both public and private to devote sufficient attention to rational marketing and distribution of products. The pattern of industrial ownership in Pakistan points to a concentration of the means of production. This concentration is seen in the groups of companies which are closely tied together by bonds which do not necessarily arise out of excellence of industrial and technological capabilities. Each group engages in a broad spectrum of industrial, commercial, and trading activities and is heirarchly controlled. Activities in one group may include the manufacture of cotton textiles, chemicals, consumer goods, agricultural produce, commercial trading, banking, insurance and sale agencies for foreign manufactures. Taken collectively the resulting textile industry, or steel re-rolling industry, for example, may be quite large, but because no individual unit receives the undivided attention of top management trying to excell in that particular industry, the resulting productivity, profitability, managerial efficiency and overall contribution to the economy compares poorly with industrial performance in the industries of developed countries. Greater productivity and ability to compete on a world wide basis can accrue from specialization of managements in one industry. This specialization will be encouraged during the Third Plan period.

Third Plan Strategy and Industrial Policy

8. The strategy of industrialization for the Third Plan flows inevitably from the lessons learnt from industrial development in the last one and a half decade and the industrial targets set for the next 20 years under the Perspective Plan. During the Second Plan period the rate of growth of industry was about 8.6 per cent as against 3.5 per cent in agriculture. The Perspective Plan postulates growth rates of about 10 per cent and 5.6 per cent respectively in industry and agriculture. Of the planned increase in national income during the Third Plan period as much as 65 per cent is expected to be contributed by the non-agriculture sectors. Investment targets of the Third Plan envisage a marginal saving rate of at least 22 per cent. Past experience shows that the large scale industrial sector which saved and re-invested nearly 75 per cent of its profits was making a handsome contribution to the domestic savings effort. This implies that large scale manufacturing must continue to be the leading sector in the economy to yield a marginal saving rate higher than the average rate for the economy. These basic parameters have been kept in view in formulating the industrial strategy for the Third Plan.

9. The first important element in the strategy of industrialization for the Third Plan is a shift in emphasis from consumer goods to capital goods industry to maintain the contribution of the industrial sector to the savings effort and to extend the import substitution programme over a much wider front. The domestic demand for many capital goods is now large enough to permit domestic produc-

tion on an economical scale and the country's long term objective of eliminating dependence on external assistance cannot be achieved unless more and more of the capital goods required for development are produced within the country. To achieve this shift successfully special attention will be paid to research and training to develop skills and technology necessary for the promotion of capital goods industry. Efforts will also be made to enlarge the size of the market for many of the capital goods industries through various bilateral or multilateral arrangements to promote the setting up of efficient and economic units.

10. The second important element of the strategy for industrialization is the policy of setting up of industries primarily for exports to achieve the country's export targets for the Third Plan and the 20 year Perspective Plan. The country's natural or acquired advantages in the export market have been carefully analysed in determining industries which would be developed or expanded primarily for exports.

11. The major objectives of the Third Plan's Industrial Programme are mutually interdependent in the long run and all have high priority. An organized effort directed towards the achievement of these objectives requires that:

(*i*) industrial investment must be made at a pace and of a composition which will ensure that output goals are met and that industrialization contributes its share to the G.N.P. targets;

(*ii*) a beginning must be made with the setting up of heavy industries notably industries to produce machinery and equipment and other capital goods;

(*iii*) to produce and market at stable prices the essential consumer goods and services for domestic consumers consistent with and equitable distribution of income and the growing disposable income of wage earners;

(*iv*) to increase productivity of existing industries; and

(*v*) to provide maximum employment opportunities consistent with economic production.

Criteria for Investment

12. No simple criterion can be laid down to govern all investment in industry. The overriding principle is to create a structure for the industrial sector which is well-balanced internally and in relation to other sectors of the economy, through efficient utilization of investment and manpower resources and with the minimum of strains for the balance of payments. Within these constraints, the composition of new industrial investment must be determined by assigning the maximum weight to scarce factors, which at the present stage of country's development are foreign exchange and capital. The availability of domestic resources is comparatively more flexible and the manpower requirements can be augmented by imported skills or temporary substitution by less qualified workers.

13. *Balance of Payment Criteria.*—Thus the first criterion emanating from the relative scarcity of foreign exchange relates to the production for export and for import substitution. High priority must be given to such industries which can contribute to diminishing strains on the balance of payments even if some of these industries have long gestation periods and tie up considerable resources without contributing proportionately to the growth of output over the short run.

14. *Value added and Return on Capital.*—The next important criteria is linked to the value added in the industrial process. The productivity of capital in the manufacturing process is directly related to the degree of fabrication which is much higher in capital goods than in consumer goods. This implies that the raw material input per unit of output is much larger in industries with low productivity which are generally consumer goods industries and considerably lower in sophisticated capital goods industries. Keeping in view the natural resource endowment of the country, there will be greater emphasis on industries whose raw material requirements are less and the value added higher. This criteria may be altered for industries which are necessary to set up to exploit domestic materials and natural resources.

15. *Employment Criteria.*—The Employment criteria governs the choice between labour intensive and capital intensive technology. Maximisation of employment is not consistent with maximum efficiency of capital productivity in industries using modern technology. This is particularly so in certain industries where value added on account of modern technology is very high and for which a high degree of automation is essential. Ability to keep pace with technological changes and to benefit from increased productivity through automation in such areas is essential for the success of the country's effort for industrialization. There are however a number of industries in which the increase in productivity on account of modern technology is only marginal. Only by combining a policy of concentration on capital intensive technology in case of high productivity industries with highly labour intensive technology in other industries and almost all auxiliary services and facilities, it will be possible to achieve the growth targets of the economy without undermining the employment objective. The Third Plan proposes to generate 5.5 million additional jobs by 1970 of which nearly one million will be in the manufacturing sector.

Role of Public and Private Sectors

16. As in the Second Plan, major reliance will continue to be placed on private investment for the bulk of industrial investment during the Third Plan. The role of Government, both at the Central and at the Provincial levels, will be to promote industrialization through providing the climate and the infra-structure required for investment in manufacturing industries, and to resolve such conflicts as may arise between individual interests and national priorities. Government will

spend Rs. 188.5 million in the provision of industrial estates for large and medium scale industries, Rs. 38 million in schemes of industrial research and training, Rs. 463.5 million in a promotional programme for small scale industries and Rs. 128 million in scientific and industrial research.

17. Public industrial investment will be undertaken only in those cases where private capital is not forthcoming, where a joint venture cannot be organised or where considerations of national interest dictate public investment. Direct Government investment in manufacturing industries through the Industrial Development Corporations and other Government sponsored Corporations will be about Rs. 3,762 million. The proportion of Government investment to private investment in manufacturing industries during the Third Plan will be somewhat larger than the proportion in the Second Plan. This is occasioned by the need to accelerate the pace of industrialization in East Pakistan and also to promote heavy industries, notably manufacture of basic metals, production of machinery and fertilizers which are vital to the long term development objective of achieving a self-sustaining economy.

Concentration of Industrial Wealth

18. The rapid industrial development in the last two decades has been accompanied by growing concentrations of income and wealth in the hands of a few family groups. To some extent, this was inevitable as the demands for capital formation necessitated generous fiscal concessions for reinvestment of profits and for the entire accumulation process. A stage has been reached, however, where the growing concentrations of industrial wealth are likely to raise not only problems of social justice but also of economic efficiency. If these concentrations of wealth result in monopolistic practices, industrial collusions, weeding out of new comers with fresh ideas and enterprise and the exclusive dependence of big enterprises on family members alone, there is a serious risk that the dynamism of the industrial sector may be lost and the whole process of industrial growth tend to decay. Thus, broadening of the industrial base becomes a necessity to preserve the very character of economic growth.

19. The policy of the Government is neither to liquidate the big industrial families nor to deny them participation in the future growth of this country but to ensure that opportunities are created for new comers and for investors with modest means to participate in industrial ventures. It would be in the larger interests of the country as well as in the interest of the big families themselves if they turn their attention increasingly to more sophisticated industries, requiring larger capital and developed technical know-how, and leave simpler industries to smaller investors. This will permit big industrialists to develop certain lines of specialization rather than disperse their energies and attend over too wide a field. It is in this spirit that Government has already decided that manufactures of basic raw materials

should not undertake successive stages of fabrication, nor should the industrialists acquire control of financial institutions such as banks and insurance companies. The Government can also associate itself with private capital in setting up sophisticated industries and provide the necessary management and some of the financing to ensure that these industries are run on proper lines.

20. The internal profits of the big industrial families are now sizeable enough to permit them to expand their industries without large and continuing assistance from the development banks like PICIC and IDBP and a major recourse to credit from the commercial banks. The present situation demands that credit facilities of these institutions be placed more and more at the disposal of the new comers and the big industrial families should finance their future expansion increasingly from their own profits. This consideration underlines some of the proposals which are currently being formulated to diversify the loan operations of PICIC and IDBP.

21. As some of the above steps are taken, the ownership of capital in the industrial sector will become increasingly diversified and the problem of concentrations of industrial wealth will lose much of its present significance. This will lead to the emergence of more enlightened capitalism in Pakistan. The big industrial groups can help this process by floating more and more of their future ventures as public companies and by associating a larger class of share-holders with their existing enterprises. This will not only promote the national interest but also protect the interest of the big industrial families.

Foreign Investment

22. Foreign private investment in manufacturing industries is estimated at about Rs. 330 million at the commencement of the Second Plan. During the Second Plan it is estimated that the additional foreign investment will be about Rs. 450 million. The Third Plan projects that such investment during 1965-70 will be of the order of Rs. 700 million. Government has provided liberal incentives to attract private foreign investment. During the Plan period, foreign investment will continue to be encouraged in industrial projects involving advanced technical know-how and managerial skills.

Location of Industry

23. Industrial investment policy as to kind and location of industry will be pragmatic and rational to the maximum extent consistent with over-riding Plan objective of eliminating economic disparity between East and West Pakistan. As a general guide, investment opportunity which offers maximum rate of return on invested capital will be selected over alternative investments for the same purpose but indirect benefits of dispersing industries throughout the country will be fully taken into account. Clustering of industries around a few industrial centres entails many additional costs inherent in rapid urbanization besides numerous social

problems in the long run. Besides these general criteria, special considerations must determine the location of different kinds of industries. For some industries such as cement and steel proximity to raw material is essential, while for others, factors such as availability of skilled labour, or easy access to markets are more important. Export industries are more competitive if located near port towns, but this factor must be weighed against possible advantages from proximity to raw material such as natural gas or power supply. Subject to these considerations industries will be sanctioned for locations where they will maximise contribution to economic growth on the basis of rational and pragmatic analysis subject to exceptional considerations of intra-regional disparities and long term development.

Sanctioning Procedures

24. The objective will be to exempt as much of the investment in industry as possible from the requirements of prior sanctions by governmental agencies. Where the foreign exchange component of the investment can be found by the financing organizations *viz.*, PICIC and IDBP and the investment proposed is covered by the Industrial Investment Schedule prior approval of Government authority will not be required. Similarly, proposals in which the entire foreign exchange has come from the utilisation of Bonus Vouchers within the framework of Industrial Investment Schedule will not require prior approval of Government. The financing organizations will, however, agree to provide credits only in line with the Plan objectives of dispersal of ownership and of location consistent with economic considerations. Cases involving foreign investment will continue to require prior Government approval. The procedure for the evaluation and sanctioning of proposal either by the financing organisations or by Governmental authority will be stream-lined and simplified. Consideration of 1,200 proposals on the average per year will require expansion of personnel devoted to this process and will also require that considerable delegation of sanctioning authority be made for specified categories of projects.

25. The preparation of the Industrial Investment Schedules will be improved during the Plan period by new procedures which will apply input/output analysis. Input/output analysis is an improvement over past procedures because it identifies the inter-relationships of different sectors of the economy and establishes requirements for capital and intermediate goods implicit in planned growth and investment targets. Moreover, it projects potential demand for different consumer goods on the basis of detailed elasticities. The production targets derived from the input/output analysis will be translated into investment targets, assuming realistic lags in construction, and in turn, the investment targets will be related to financial sanctions expressed in the Industrial Investment Schedule.

Standards and Quality Control

26. Important as the quality of industrial products is for domestic consumption, adherence to standards in export goods is of crucial importance. The Pakistan

Standards Institution has made a start in standards and quality control by the preparation of some 500 national standard specifications for various food products, textiles, chemicals and electrical and mechanical goods during the last five years. This is only a beginning and further accomplishments are urgently required. A scheme for putting certification marks on the products for which national standards have been prepared is in force. The standardisation programme will be intensified during the Third Plan period. To assist industry in quality control laboratory facilities for testing will be provided. The adoption of the metric system of weights and measures will be promoted.

Productivity

27. Substantial improvement in productivity in industry is an urgent need. It is within reach but requires concerted effort. The Pakistan Industrial Technical Assistance Centre has during the Second Plan rendered useful assistance to industry but by and large the work has been of a "problem solving type". During the Third Plan period a separate Productivity Wing will be organised within PITAC from which teams of experts will be formed to conduct surveys and productivity studies of various industry sectors and advise the industry on improving production methods, institution of controls, procedures and techniques for reducing ineffective time, reducing wastage of materials, improving equipment and machinery utilisation, reducing worker fatigue and improving the quality of products to reduce costs and increase overall productivity of investment. These teams will initially be assisted by foreign experts but arrangements to train Pakistan personnel will be vigorously pursued.

Flow of Information

28. A major factor hindering integrated industrial development is the inadequate and sporadic flow of information about industrial development in specific fields between the parties involved in industrialization. These parties include both private and public organizations, institutions, individuals and groups who directly or indirectly implement actual industrialization. High priority will be given in the Plan period to a systematic flow of current information between the financing institutions, the representative bodies of commerce and industry, the organizations created for assisting in project formulation like the Investment Advisory Centre and the Government organizations responsible for the formulation of industrial plans and their implementation. A specific step taken will be to issue a National Industries Directory providing information regarding existing industries, their location, production capabilities and to up-date and re-issue such a Directory at least once a year.

Project Preparation

29. Another substantial hindrance in the way of speedy and orderly industrialisation is the inadequacy of facilities for preparation of specific projects. On a

rough estimate the implementation of the Third Plan Industries Programme will require the preparation of 4,000 to 5,000 major projects. This task will essentially be performed by competent consultancy firms preferably within the country. Steps will be taken to encourage private consultant firms within the country to equip themselves for the preparation of specific projects in association where necessary with consultants from abroad.

Industrial Research

30. The pace of applied industrial research will be accelerated. Industry is a changing field and it behoves responsible and progressive elements in private industry to join hands with Government to ensure that Pakistan keeps up with external development which may be used to advantage and also that the country contributes its own measure of research in the interest of greater productivity from Pakistan's industry. The imperative need for stimulating scientific and industrial research has been recognized by Government and a separate Division for Scientific and Technological Research has been set up. The Council of Scientific and Industrial Research, which was established in 1953 has already developed a number of new processes for the optimum utilization of indigenous resources. Some of these like the ones for the production of water proofing material for jute, water proofing additive for cement light weight concrete, Vitamin-A concentrate from shark liver, dry distemper, printing ink, insulation board from baggasse, chipboard from wood waste and synthetic marble are already in commercial uses. The Council already has its laboratories at Karachi, Dacca, Rajshahi, Lahore and Peshawar comprising 21 Divisions. During the Third Plan period the activities of the Council will not only be continued but its facilities will be expanded to undertake research on fuels, minerals processes, building materials, food technology, leather, etc.

Training

31. Training is imperative for successful industrial development. The Plan proposes the strengthening of vocational schools and promotion of technical training within industrial units, private as well as public. The projects for heavy industries will include training programmes for key personnel, Institutes for technical education will be strengthened and existing Institutes improved. Students from regions with inadequate educational facilities will be given scholarships for technical training. Special emphasis will be laid on training and education in the field of management. Suitable courses in business administration have been established in Karachi and are proposed for Daçca early in the Third Plan period. For the training of existing management, the Government will support private efforts to establish an institute for management which will organize in-service training programmes and research. Industry will be given increased facilities for training their personnel abroad.

Small Industries

32. The industrial mix in the country spans a range from village and handicraft industries using no power to large industrial undertakings employing modern technology, substantial power and concentrations of high level manpower. For the purposes of the Plan Small Industries are defined as industries which employ manual labour but do not use any motive power or industries which use motive power and use fixed assets, other than land, valued at not more than Rs. 250,000.

33. In the Second Plan the importance of small industries was emphasised. A provision of Rs. 284 million as Government investment was made for promotional measures such as the setting up of small industries estates, common facility centres, and technical and management service centres. It is estimated that during the Second Plan period an investment of Rs. 218 million shall be made for these purposes.

34. In the Third Plan, the governing principles for the development of small industries will be:

(*i*) to adapt small industries to changing technological, economic and social conditions;

(*ii*) to stimulate production of implements and equipment required for agriculture;

(*iii*) to encourage the processing of indigenous raw materials;

(*iv*) to create additional employment opportunities;

(*v*) to modernize such existing units as have sound economic prospects;

(*vi*) encourage the growth of cottage industries in rural areas generally, and in particular wherever resources and markets are available;

(*vii*) to bring about a closer relationship between the small and larger industries, through the production of spares and accessories or components for large scale industry or through providing facilities for the maintenance and repair of equipment in use in large scale industries or in other sectors of the economy; and

(*viii*) to preserve and promote traditional arts and crafts.

35. The Plan envisages a considerable expansion of the advisory and commercial services provided by the Government under the aegis of Small Industries Corporation in each Province. A network of small industries service centres will be set up all over the country, supplemented by extension services, including mobile extension units, to give technical and management advice. Where necessary, production facilities will be organised, for example common facility centres or small industries estates provided with transport, water, power and other facilities. Similarly a network of supply and marketing services will be set up, and credit services organized in co-operation with the banks.

36. The programmes proposed in the Plan visualize that new small and medium sized industries will be encouraged; that sub-contracting, which implies that some large scale industries will buy systematically from smaller units will be fostered; that small industries with prospects of advantageous development will be assisted, but that the aim will be not to perpetuate an uneconomic structure.

37. The promotional Government financed activities will fall in two broad categories: (*i*) technical and management services, and (*ii*) commercial services. Technical and management services will be provided along the following lines:

(*i*) Small Industries service centres for selected industries will provide advisory service and demonstrations on technical processes and use and improvement of equipment, training in business management, research in use of indigenous materials, and surveys of industrial prospects. Rural industries centres—one in each Province—are at present being set up with foreign assistance and will help in these tasks. These centres will assist in training rural industrial extension officers.

(*ii*) Small industries extension services will serve areas where such industries are or can be concentrated; mobile extension services will serve remote areas.

(*iii*) Pilot projects will be set up to demonstrate possibilities of new industries on an experimental basis.

(*iv*) A provincial design centre will undertake research on industrial design and handicrafts collaborating closely with existing arts and crafts institutions.

Commercial services will include the following principal functions:

(*i*) Production facilities, including common facilities centres and mobile common facilities units, and small industrial estates. These production facilities may have to be started by the Corporations but will be transferred to private or co-operative enterprise as soon as feasible.

(*ii*) Supply and marketing services, including sales and display centres to market small industries products and display modern designs, patterns and suitable equipment; grading and inspection to ensure standardized quality of products; and supply of materials and equipment, especially imported supplies, which will be sold to small industries by the Corporations to the extent necessary.

(*iii*) Credit services, including loans for modernization and extension, and credit for purchase of raw materials and for marketing. The co-operation of existing financial institutions will be enlisted, but direct credit in kind (raw materials or pre-payment of products to be marketed) and, to a more limited extent, to finance equipment on a hire-purchase basis, will also be provided by the Corporations.

THE THIRD PLAN DEVELOPMENT PROGRAMME

38. The precise composition of the development programme for a period of five years cannot be predicted in advance. Nor would it be realistic to give breakdowns of investment and production targets separately between small, medium and large scale units in the different industries. Rigidity of investment target may tend to freeze the pattern of development and may militate against the fulfilment of the production targets as a whole. At the same time, a number of investigations and studies on the need and prospects for the development of specific industries are presently in progress. Measures for regional economic co-operation between Pakistan, Iran and Turkey will also cover co-operation in the field of industry. It is too early at this stage, to clearly identify the industrial relationships and complementaries which it will be necessary to provide for in the industrial programme in the region, but indications are that such fields as petro-chemical a wide range of capital goods and industries for the manufacture of transport equipment will lend themselves to regional co-operation. This may require adjustments in the industrialization programme envisaged in the Plan at this stage. Tangible agreements arrived at through the Regional Co-operation for Development will be implemented by appropriate changes in the compositions of the Annual Development Programmes and the Industrial Investment Schedules.

39. The Annual Development Programmes for the Government financed investment and the Industrial Investment Schedules in the private sector investment will set out in detail the investments that should be made in each sub-sectors and in individual industries within the framework of the Plan. The Investment Schedule will also indicate the quantum of investment that should be made through setting up of small industry units. The performance both under the Annual Development Programme and the Industrial Investment Schedule will be reviewed annually and such adjustments as may be necessary made in the ensuing year.

40. The table below sets out the investment which should be made in the various groups of industries, in promotional activities and in scientific and industrial research in line with the Plan objectives and policies. The paragraphs that follow show in brief the present stage of development in each groups of industries in terms of the principal industries contained in the group, the direction for future development and the tentative projected investment in the principal industries. The Industrial Investment Schedule to be published separately will specify the actual capacities already authorised in each industry, the investment and physical targets planned for individual industries as also the extent to which investment should be in terms of small and medium sized units.

PROPOSED EXPENDITURE ON INDUSTRIAL DEVELOPMENT DURING THIRD PLAN PERIOD
(July 1965 to June 1970)

(In million rupees)

Industry Group	Public Sector			Private Sector			Total
	East Pakistan	West Pakistan	Total	East Pakistan	West Pakistan	Total	
1. Food manufacture	196	—	196	290	300	590	786
2. Beverages	—	—	—	5	5	10	10
3. Tobacco manufactures	—	—	—	25	25	50	50
4. Manufacture of textile	77	—	77	1,400	1,000	2,400	2,477
5. Footwear and Apparels	—	—	—	28	22	50	50
6. Manufactures of Wood and cork	120	1	121	10	12	22	143
7. Furniture and fixtures	—	—	—	15	25	40	40
8. Paper and paper products	484	—	484	50	100	150	634
9. Printing and publishing	—	13	13	16	16	32	45
10. Leather and leather goods	—	—	—	20	19	39	39
11. Rubber products	—	—	—	25	25	50	50
12. Chemical industries	680	342	1,022	205	243	448	1,470
13. Products of petroleum coal and gas	—	—	—	80	120	200	200
14. Petro-chemical industries	145	40	185	231	410	641	826
15. Non-metallic mineral products (cement)	169	152	321	250	409	659	980
16. Basic metal industries	279	155	434	162	950	1,112	1,546
17. Metal products industries	11	—	11	200	250	450	461
18. Machinery except electrical machinery	185	212	397	160	200	360	757
19. Electrical machinery apparatuses and appliances	68	100	168	106	120	226	394
20. Transport equipment	156	25	181	250	119	369	550
21. Miscellaneous industries	25	17	42	272	130	402	444
22. Industrial estates	140	48.5	188.5	—	—	—	188.5
23. Training	18	20	38	—	—	—	38
24. Small industries promotional programme	297	166.5	463.5	—	—	—	463.5
25. Scientific and industrial research	50	78	128	—	—	—	128
	3,100	1,370	4,470	3,800	4,500	8,300	12,770

41. The total figure of Rs. 4,470 million of public sector investment includes an investment of Rs. 250 million by the Central Government as shown below:

CENTRAL GOVERNMENT INVESTMENT BY LOCATION

(*Rs. million*)

	East Pakistan	West Pakistan	Total
i) Scientific and industrial research	50	75	125
ii) Schemes for technical assistance and training for small industries and for increasing productivity	50	38	88
iii) Development of industries in special areas	—	30	30
iv) Printing and publication	—	7	7
Total:	100	150	250

FOOD MANUFACTURING INDUSTRIES

Wheat, rice and grain milling

42. The Second Plan provided for an additional capacity of 400 thousand tons of wheat milling and 500 thousand tons of rice milling by June 1965 through new units and expansion and modernization of the existing units. Actual performance has exceeded these targets. By December 1964 the total installed and sanctioned capacity of wheat milling and rice milling which was about 1.0 million tons and 2.0 million tons for wheat and rice respectively in 1959-60 increased to 2.0 million tons and 2.9 million tons respectively.

43. It is proposed to create additional capacity of 300 thousand tons and 360 thousand tons for wheat and grain milling and 1.0 million tons and 800 thousand tons for rice milling in East and West Pakistan respectively to meet the requirements of an increasing population.

Processing and canning and preservation of fruits and vegetables

44. This industry offers good external and internal markets. Exports during 1963-64 of Rs. 3.4 million are expected to increase to Rs. 10 million by 1970. There was an increase in the capacity of canned and preserved fruits and vegetables from 1,500 tons to about 15,000 tons during the Second Plan period.

45. In keeping with the Third Plan's target of increasing the production of fruits and vegetables from 4.45 million tons to 5.81 million tons, it is proposed to establish new large, medium and small sized units for dehydrating and canning of vegetables and fruits and for the preparation of fruits concentrates during the Third Plan period with a total investment of Rs. 24 million.

Canning and Preservation of Fish and others

46. The country's potential fish resources are rich and abundant. As a result of Government's efforts to develop fish industry, the production of fish and its export has been rising continuously. Fish supply is expected to increase in the Third Plan period by about 35 per cent from 3.5 lac tons in 1964-65 to 4.7 lac tons by 1969-70.

47. At present about 47 thousand tons of fish is exported from the country. It is expected that this will increase almost three fold by 1969-70. Keeping in view both the increasing local demand and exports, it is proposed to create an additional capacity of 25,000 tons for canning and preservation of fish and other sea food in East Pakistan and 20,000 tons in West Pakistan.

48. In addition to the canning, freezing, preservation and export of some of the fish, a process evolved by the Pakistan Council of Scientific and Industrial Research for the production of fish liver oil, rich in Vitamin A, is in commercial use. Fish liver oil has a large export market particularly the Japan, Australia and U.K. Notwithstanding this possibility there is sizeable wastage of fish resources. During the Plan period the possibility of producing fish flour on a commercial scale to mix with wheat and rice flours so as to provide cheap but high protein diets will be explored.

Bakery and Confectionery

49. The total installed capacity of mechanized units for biscuits was 14 thousand tons and confectionery of 9.5 thousand tons in December 1964. This industry also offers export prospects. During 1963-64 the export was worth Rs. 9 lacs which is projected at 25 lacs by 1969-70. An investment of Rs. 32 million in these industries for setting up new units and expansion and modernization of existing units is provided for in the Third Plan period.

Tea

50. The Second Plan set a production target of 63.8 million lbs. The production during 1964-65 is 63 million pounds. The domestic consumption of tea is increasing by about 2.1 million lbs. per annum and on this basis domestic consumption will be about 64 million lbs. by 1969-70. Keeping in view this rate of increase in the consumption of tea a production target of 73.5 million lbs. has been set for 1969-70. Thus about 10 million lbs. will be available for export if the Plan target is achieved. Tea processing and blending capacity will be increased accordingly through modernization and balancing of existing units and through expansion.

51. The Plan proposes a total allocation of Rs. 32.60 million with a foreign exchange component of Rs. 19.50 million in private sector for the tea industry. Of the proposed total investment of Rs. 32.60 million, Rs. 2.5 million is allocated to West Pakistan for balancing, modernization and expansion of Tea Blending and Packing units.

White Sugar

52. A target of 5,00,000 tons for the production of white sugar by 1965 was fixed in 1963. This if achieved would have provided about 9 lbs. of sugar per capita per annum. The mills sanctioned to achieve this production of 5,00,000 tons are, however, in varying stages of implementation. Actual production in 1964-65 is estimated at 3,12,000 tons. In consideration of the changing habits of the people, and the growing urbanisation, domestic consumption of white sugar by 1970 is projected at about 11 lbs., per capita per annum. Sugar industry is important not only for deriving maximum value from sugarcane but also for providing molasses and bagasse which are raw materials for a number of chemical industries and for the production of paper and board. A target of 640,000 tons of white sugar is set for the Third Plan. The Plan envisages that about 410,000 tons would be produced in West Pakistan and 230,000 tons in East Pakistan. The completion of the mills already sanctioned will require an investment of Rs. 272 million during the Third Plan period. A further investment of Rs. 326 million during the Plan period will be necessary for achieving the target of 640,000 tons. The increase in production of sugarcane over the Plan period is expected to be about 40 per cent from 20.7 million tons to 28.3 million tons.

Edible Oils and Vegetable Ghee

53. The production of vegetable ghee during 1964-65 will be of the order of 90,000 tons. The capacity already in position or under installation is 115,000 tons of which the capacity in East Pakistan is 9,000 tons. There will be no need for additional capacity in West Pakistan during the Third Plan. In East Pakistan, however, vegetable ghee is beginning to find favour with consumers who traditionally have been using oils (refined and otherwise but not hydrogenated). The capacity for the production of hydrogenated vegetable oil in East Pakistan will be increased to 25,000 tons.

54. The production of cotton seed is expected to increase from 776,000 tons in 1964-65 to 12,37,000 tons in 1969-70 and of other oil seeds from 401,000 tons to 590,000 tons. These increases should help substantially to reduce the dependence on imports of oil, provided the recovery of oil from the seeds is made more efficient. The oil extraction industry will be encouraged during the Plan period to modernize its equipment. Better delinting equipment and solvent extraction plants will also be installed at suitable locations.

Tobacco Manufacture

55. The original Second Plan target of 15,000 million cigarettes was increased during the Plan period and the installed capacity now stands at 24,096 million cigarettes. Production during 1963-64 was 17,672 million and is forecast at 18,500 million in 1964-65. Production of cheaper variety cigarettes will continue to be encouraged to replace bidis which require foreign exchange expenditure.

56. It is planned to increase the production of cigarettes to 30,000 million by 1969-70.

57. Cigar and cheroots have an installed capacity of 110 lac Nos. Further expansion of this industry by setting up small sized units and developing tobacco processing capacity, has been provided.

Manufacture of Textiles

58. The national per capita consumption of cotton cloth is estimated at about 14 yards in 1964-65, made up of a per capita consumption of about 8 yards in East Pakistan and 20 yards in West Pakistan. The domestic consumption is projected to increase to about 18 yards per capita in 1969-70. The major share of the increase is projected for East Pakistan, where in the past consumption has been low for a variety of reasons such as climatic conditions, with their effect on apparel, and low incomes. The total yarn required for the production of cloth for domestic consumption will be 458 million lbs. If the domestic consumption in East Pakistan increases to about 14.5 yards per capita the yarn requirements for cloth for East Pakistan will be about 203 million lbs.

59. The consumption of yarn by ancillary industries, notably hosiery and other knitted goods, thread, laces, braids and specialised textiles is projected to increase from an estimated 40 million lbs. in 1964-65 to 100 million lbs. in 1969-70; 40 million lbs. in East Pakistan and 60 million lbs. in West Pakistan.

60. Export of yarn is presently at a level of 50 million lbs. and of cloth at 150 million yards, or a total of about 80 million lbs. in terms of yarn. Provision is made in the Plan for an export availability of about 160 million lbs. in terms of yarn. Earnings from yarn in terms of foreign exchange are only marginally higher than earnings from the export of corresponding quantities of cotton. The export of cloth to the extent possible will therefore be preferred.

61. The total production of yarn by 1969-70 should thus be of the order of 720 million lbs. Ideally, spindles should operate three shifts at an efficiency of about 95 per cent. Three shifts operation may, however, not be universally practicable but the average should work out to at least 2-1/2 shifts for about 95 per cent of the capacity installed. Operational efficiency in the industry may not reach 95 per cent in all cases but there is room for distinct improvement in the present figure of about 83.8 per cent efficiency. On these bases a target of 4 million spindles is provided in the Plan.

62. The Second Plan recognized the need for expansion of Cotton textile industry in East Pakistan so as to stimulate private investment in that Province. It is a premises of the Third Plan that there should be no expansion of this industry in West Pakistan except for exports. Investment in this industry in West Pakistan

will be restricted to balancing, replacements and modernizations but investment in the production of textiles for export will be encouraged. Exports of textiles from East Pakistan in any substantial quantity are not foreseen for this Plan period. Expansion of the industry in East Pakistan will therefore be devoted to meeting domestic requirements.

63. Presently the spindleage sanctioned aggregates 2.9 million; 0.8 million in East Pakistan and 2.1 million in West Pakistan. Of this 0.61 and 1.95 million spindles stand installed in East and West Pakistan respectively. The Plan provides for expansion of the spindleage in East Pakistan to 1.3 million and in West Pakistan to 2.7 million. The 0.6 million spindles to be added in West Pakistan will be allocated to existing mills and where necessary to new units but will be clearly devoted to exports. This number may be increased in the light of actual exports as necessary.

Cotton Looms

64. It is an assumption of the Plan that out of the total of 2,290 million yards of cloth that may be required for domestic consumption at a national per capita consumption of 18 yards, 970 million yards will be supplied by handlooms, 535 million yards in East Pakistan and 435 million yards in West Pakistan. Presently 50,000 powerlooms stand sanctioned, 14,000 in East Pakistan and 36,000 in West Pakistan. Out of these about 5,000 and 32,000 looms are in position in East and West Pakistan respectively. The Plan provides for 20,000 and 35,000 powerlooms in East and West Pakistan respectively by 1970 to meet domestic requirements and to begin with for 15,000 looms for exports of cloth from West Pakistan. The number of powerlooms in West Pakistan for export may be increased depending on export performance.

65. The balancing and modernization of the existing industry and the replacement of obsolete spinning and weaving equipment particularly for production for export is a vital requirement of the Plan and will receive priority in investment. Investment will also be made in the modernization of the hosiery and knitted goods industries and in the promotion of industries for the production of specialized textiles and for laces, tapes, and for dyeing, printing and finishing. A provision of Rs. 500 million is made in the Plan for these purposes.

66. The handloom sector in the textile field has a large potential for employment and properly organized for fair sized exports. Special attention will be given to the problems of the handlooms under the Small Industries Programme, particularly to ensure adequate supply of raw material, proper finishing of the handloom product and assistance in marketing.

Woollen Industry

67. The present sanctioned capacity of the industry is over 59,462 spindles and about 452 looms. This capacity, if fully worked, will be adequate for the

Third Plan requirements. The difficulty experienced by the industry particularly in the production of woollen goods has been due to the foreign exchange requirements for the import of wool tops. Units for the production of wool tops after importing raw wool have recently been sanctioned. This will enhance the availability of wool tops without making additional demands for foreign exchange. While new capacity will not be sanctioned during the Plan period, facilities for the balancing and modernisation of the existing capacity and its fuller utilization will be provided. Units using in the main indigenous raw wool with or without an admixture of imported wool or synthetic fibres or supply yarn to the carpet industry will be the first to receive encouragement.

Synthetic Fibres (Artificial Silk) Weaving Industry

68. This industry is expected to provide about 3 yards per capita of synthetic fibres cloth by 1970. Adequate capacity for weaving the cloth already exists. The import of synthetic yarn are allowed on bonus vouchers presently but the commissioning of Viscose Rayon Plant at Kaptai in East Pakistan and the Acetate Rayon Plant near Lahore in West Pakistan will enable the industry to make better use of its capacity. The finishing facilities for synthetic fibres cloth will however be modernized and expanded during the Plan period.

JUTE MANUFACTURES

Hessian and Sacking

69. The Second Plan minimum requirements of 12,000 looms by 1965 were revised in 1962 to a target of 14,000 looms and was further revised in 1963 to a target of 18,000 looms. For a variety of difficulties, the number of looms so far installed is only about 12,500. The remaining capacity is in varying stages of implementation and it is estimated that an investment of Rs. 277 million will be necessary during the Third Plan period to achieve the target of 18,000 looms.

70. Manufactured jute is the most important export of Pakistan. Export of jute goods rose from about 197,000 tons to 250,000 tons in 1963-64 and is expected to be maintained at that level in 1964-65 notwithstanding labour troubles during the year. The world demand for jute goods has been increasing steadily. An export market for 600,000 to 700,000 tons of jute goods could be found by 1970 through an energetic export drive. The domestic consumption for jute goods in view of the targets for the production of foodgrains, sugar, cement and fertilizers is projected to rise to 150,000 tons by 1970.

71. The Plan provides for a production of a minnimum 800,000 tons in 1970 for which 25,000 looms should be in full operation. To meet a part of the domestic requirements of West Pakistan 1,000 of these looms may be located in West Pakistan.

72. Investment during the Plan period to get 25,000 looms in full operation by 1970 is estimated at Rs. 732 million including Rs. 277 million on account of looms under implementation at the commencement of the Plan period. Of this investment of Rs. 732 million, Government investment is projected at Rs. 77 million.

Broad Looms

73. A beginning was made during the Second Plan period with the setting up of broad looms the products of which are consumed as backing cloth for carpets upholsteries, roofing felts, etc. and are in demand in developed countries. Some 400 of these looms will be in operation by June 1965 and the setting up of another 800 will be under negotiation. The target for the setting up of broad looms is projected at 2,500 looms by 1970. These should provide a production of 120,000 tons at the rate of 48 tons per loom year working two shifts, practically all of which will be for export. The investment during the Plan period is estimated at Rs. 400 million including Rs. 140 million on account of looms under negotiation.

74. The foreign exchange earnings from the export of jute goods are estimated to increase from Rs. 350 million in 1964-65 to Rs. 800 million in 1969-70.

Footwear

75. This is a labour intensive industry consisting mostly of small units employing traditional production methods. During the Second Plan period a few large sized units were sanctioned and allocation for balancing and modernisation of small units was made. The industry is fully equipped to meet the domestic requirement and to export. During 1963-64 exports were Rs. 10.2 million and are expected to increase to Rs. 20 million by 1969-70. Provision has been made in the Third Plan for balancing and modernisation of existing units and to establish new units with a capacity of 100 lac pairs of leather, rubber and PVC shoes in addition to the present installed and sanctioned capacity of 480 lac pairs per annum.

Wood and Wood Products

76. Considerable progress has taken place in the development of this industry during the Second Plan. Some 16 new units in West Pakistan and 14 in East Pakistan were sanctioned for the manufacture of Plywood, Tea chest, furniture and wood processing and seasoning. The wood processing capacity has developed to 58,100 tons and that of Plywood and Tea chest manufacturing to 15 lac sq. ft. and 7 lac Nos. respectively. It is proposed to increase the capacity of wood processing to a production of worth Rs. 28.5 million by an estimated investment of Rs. 12.8 million in large/medium units and 2.5 million in small units. The capacity of Plywood is planned to be increased to 70 lac sq. ft. and those of tea chests to 12.5 lac Nos. No cork manufacturing capacity presently exists, but manufactures of cork worth

Rs. 4.7 million are projected during Third Five-Year Plan. It is also proposed to develop industries based on cane and bamboo.

Writing, Printing and Packing Paper

77. The Second Plan target of production of 43,500 tons of paper has been partially exceeded. Production in 1963-64 was 44,629 tons and estimated production in 1964-65 is 47,000 tons.

78. Keeping in view the educational and industrial development programme envisaged in the Third Plan, a production target of 100,000 tons of writing, printing and packing paper has been set for 1969-70, 65,000 tons in East Pakistan and 35,000 tons in West Pakistan.

79. The carry over expenditure from the Second to the Third Plan on account of projects sanctioned in the Second Plan is Rs. 195 million with a foreign exchange component of Rs. 135 million. Provision is also made for setting up of a paper mill in West Pakistan in the Plan period.

80. The surveys and investigations are currently being done by Paper experts to find out possibilities of developing an additional capacity of 50,000 tons of paper over the Plan target. Subject to satisfactory feasibility report development of the proposed additional capacity proposed to be taken in hand and for which 50 per cent of the estimated total investment cost has been provided in the Plan (*i.e.*, Rs. 185 million, Foreign Exchange Rs. 110 million).

Board

81. The Second Plan proposed a production target of 27,400 tons of various kinds of boards. Production in 1963-64 was 20,115 tons and estimated production in 1964-65 is 27,000 tons, of various kinds of boards.

82. The Plan proposes to increase the board manufacturing capacity from 27,400 tons to 100,000 tons, 30,000 tons in East Pakistan and 70,000 tons in West Pakistan, utilizing wood waste, waste paper, straw, saw mill dust, etc., etc. indigenous raw materials to meet the needs of a growing industrial society. The estimated carry over expenditure in Third Plan period on account of units sanctioned in Second Plan period is Rs. 203 million with a foreign exchange component of Rs. 114 million.

83. The estimated cost for new units in the Third Plan period is Rs. 20 million with a foreign exchange cost of Rs. 12 million.

Newsprint and Mechanical Paper

84. The Second Plan production target of 50,600 tons has not been fully achieved. Production in 1963-64 was 30,395 tons and estimated production in 1964-65 is 42,000 tons.

85. Keeping in view the substantial educational programme in the Third Plan period and export prospects a production target of 100,000 tons of newsprint and mechanical paper has been set for 1969-70, 65,000 tons in East Pakistan and 35,000 tons in West Pakistan.

86. The carry over expenditure from the Second to the Third Plan period on account of projects sanctioned in Second Plan is estimated at Rs. 1.33 million (Rs. 0.50 million in foreign exchange).

87. An additional investment of Rs. 85 million (Rs. 60 million in foreign exchange) proposed in Third Plan period for development of 35,000 tons new capacity based on bagasse in West Pakistan.

Printing, Publishing and Allied Industries

88. Although the printing and publishing industry is the third largest industrial employment in Pakistan it requires additional expansion to keep pace with the spread of education and the increased demand for newspapers, text books, magazines and other publications. New units will have to be established all over the country and the existing ones modernized and balanced. An amount of Rs. 9.60 million was spent during 1963 on the import of newspapers, books and periodicals etc. In order to reduce imports which were Rs. 9.60 million in 1963 the existing Printing and Publishing Industry requires balancing, modernizations and replacement, and new capacity established. Investment of Rs. 32 million is forecast for the Third Plan period in the Private Sector.

Leather and Leather Products

89. Hides and skins contribute substantially to foreign exchange earnings. These earnings will be increased during Third Five-Year Plan by tanning greater proportion of the hides and skins within the country. Foreign exchange earnings will be further increased by more careful handling, and by utilization of by-products. The existing tanning industry is able to meet the internal demand but additional modern units are required to exploit the export market. This is a promising industry.

90. The foreign exchange earning through the export of shoes, leather and leather goods was Rs. 30.3 million during 1963-64 and is projected at Rs. 60.0 million per year by 1970. An investment of Rs. 30.0 million for large and medium size units and Rs. 3.1 million for small units is envisaged during the Plan period. New capacity will include tanning and curing and finishing of all kinds of hides and skins, and embossing and japanning of leather and manufacture of leather belting. Moreover investment of Rs. 15.5 million is forecast for creating capacity to produce new leather goods (including goods from artificial leather and fibre board) such as suit-cases, bags, purses, straps, belts, bicycle seats, artificial leather, washers, mattings, jackets, cases for cameras, binoculars, brief cases, etc.

RUBBER PRODUCTS

Bicycle Tyres and Tubes

91. The present capacity—for bicycle tyres and tubes is 35 lakh pieces. In addition to meeting the national requirements, the industry exported bicycle tyres and tubes of a value of Rs. 1.5 million in 1963-64. New capacity for 5 lakh pieces will be created in East Pakistan during the Plan period in addition to balancing and modernisation of existing capacity.

Mechanised Vehicles, Tyres and Tubes

92. The present capacity is for the production of 2.79 lakh pieces of tyres for motor cycles, scooters, cars and heavy vehicles and 3.15 lakh tubes. Additional capacity for 1.5 lakh tyres and 4.5 lakh tubes is proposed to be created in West Pakistan and for 0.75 lakh tyres and tubes in East Pakistan during the Plan period.

Retreading

93. Capacity for retreading 30,000 tyres exists in West Pakistan and 26,000 tyres in East Pakistan. The capacity will be expanded by 500,000 in West Pakistan and 130,000 in East Pakistan through setting up small retreading units.

94. The investment on the above expansions is estimated at Rs. 25 million, Rs. 10 million in East Pakistan and Rs. 15 million in West Pakistan.

CHEMICAL INDUSTRIES

Soda Ash

95. Soda ash is required for the production of glass, sodium silicate, caustic soda, textile finishing, and clothes washing. One existing unit produces about 30,000 tons per year and will be expanded to 40,000 tons per year. Two additional soda ash units sanctioned during the Second Plan period are expected to go into production in 1966-67 when production will reach 1,36,000 tons.

96. A production target in 1969-70, has been fixed as 1,72,000 tons, with additional production capacity of 36,000 tons for East Pakistan.

97. Pakistan has abundant raw materials (common salt, gas, etc.) required for soda ash production and can produce at a cost competitive in the international market, thus presenting an export potential. Consideration will be given to the new process developed for production of soda ash by using common salt, natural gas and limestone which results in the production of *ammonium chloride* (a fertilizer) as a by-product which has an export value. This fertilizer is much in demand in Japan, Korea and other Far Eastern countries.

Caustic Soda

98. This basic chemical is primarily used in the production of soap, paper, viscose rayon and a number of other industries. The chief raw material namely

sodium chloride is available in abundance in the country. The Second Plan production target of caustic soda was 35,000 tons. Installed and sanctioned capacity of caustic soda production by mid-1965 is about 65,000 tons. Of this about 15,000 tons is in East Pakistan. Production target of caustic soda for 1969-70 has been fixed as 90,000 tons keeping in view the requirements of this chemical of the existing industries, sanctioned units and also to meet the demand of industries which consume caustic soda/chlorine and that would develop during the Third Plan period.

99. In order to meet the demand of existing industries, the country is at present spending huge foreign exchange on the import of caustic soda.

100. Large quantity of chlorine which is obtained as a by-product in production of caustic soda by electrolytic process, will be required for production of insecticides, pesticides and petro-chemicals like PVC, etc.

Sulphuric Acid

101. Sulphuric acid is one of the basic chemicals which is consumed in the production of a large number of chemicals. Large quantities of sulphuric acid will be used in the production of phosphatic fertilizers. The installed and sanctioned capacity by mid-1965 is 1,77,330 tons. Imported sulphur is being used for the production of sulphuric acid at present, as the indigenous sulphur is not sufficient to meet the requirements of this chemical. Gypsum which is abundantly available in West Pakistan is another source that can be utilised for the production of phosphatic fertilizers. Studies are being made with regard to the utilisation of gypsum for the production of sulphuric acid/superphosphates. It may also be possible to meet the bulk of the sulphur requirements under the contemplated programme of regional cooperation, principally from Iran.

102. Keeping in view the large demand of sulphuric acid for production of superphosphates and also of other industries, such as rayon, petroleum refining, industrial explosives, petro-chemicals, steel pickling, etc., the production target for 1969-70 has been fixed as 6 lac tons.

Dyes

103. Two modern dye factories with a capacity of 300 tons of sulphur black and 2,400 tons of direct azo dyes *viz.* congo red, blue and black were established during the First Plan period at Daudkhel and Nowshera in West Pakistan. Sanctions have been accorded for setting up new units in West Pakistan for manufacture of dyestuff from imported intermediates.

104. Additional capacity for 1,000 tons of dyes manufacture is proposed to be set up in each Province during the Third Plan period.

Insecticides and Pesticides

105. Timely availability of disinfectants, insecticides and pesticides is essential for health and agricultural development. Eight units have been sanctioned during the Second Plan to produce DDT, BHC, Texaphene, Pesticides, Phenyle, Nepthalene. A survey of the requirements for the Third Plan period is now in progress. Creation of additional capacity will be undertaken during the Plan period in the light of the survey results and in conjunction with basic chemicals industries, coal carbonisation, oil refining and petro-chemical industries where feasible.

Fertilizers

106. The present fertilizer manufacturing capacity is rated at 550,000 tons in terms of Ammonium Sulphate 21 per cent nutrient (250,000 tons in East Pakistan and 300,000 tons in West Pakistan) and 18,000 tons of single Superphosphate in West Pakistan. In addition a factory to produce 32,000 tons of triple superphosphate at Chittagong and the extension of the Ammonium Sulphate plant by 40,000 tons at Daudkhel in West Pakistan is in hand. Sanction has also been given to the setting up of a 170,000 tons urea (370,000 tons in term of Ammonium Sulphate) by the private sector at Mari in West Pakistan.

107. The requirements of fertilizers in the light of the programme for the development of Agriculture and prospects for exports were subjected to investigations by a firm of consultants. The prospects for the production of fertilizers were also examined by the Consultants in association with the authorities concerned. The findings of the Consultants were reviewed and endorsed by the U.N. Special Fund.

108. During the Third Plan the expansion of fertilizer capacity will be of the following order:

Plant 1	Year of completion 2	Type of fertilizer 3	Capacity 4
			(tons)
EAST PAKISTAN:			
Plant No. 1 at Ghorasal	1967-68	Urea	1,70,000
Plant No. 2 at Chittagong	1967-68	Urea	1,70,000
Plant No. 3 at Khulna	1967-68	Triple Superphosphate	1,55,000
Plant No. 4 at Chittagong	1967-68	Triple Superphosphate	1,55,000
Plant No. 5 at Khulna	1969-70	i) Ammonium Sulphate	1,67,000
		ii) NPK-15-15-15	2,94,000
WEST PAKISTAN:			
Plant No. 1 at Mari	1967-68	Urea	1,70,000
Plant No. 2 at Mari	1967-68	i) Ammonium Sulphate	1,62,000
		ii) Diammonium Phosphate	1,83,000
Plant No. 3 at Karachi	1968-69	Triple Superphosphate	1,55,000
Plant No. 4 at Salt Range	1969-70	Ammonium Sulphate Nitrate	3,00,000

109. The table below shows the production of fertilizers expected from the existing and planned fertilizerr factories :

	EAST PAKISTAN						WEST PAKISTAN					
	1965 -66	1966 -67	1967 -68	1968 -69	1969 -70	Total 65-70	1965 -66	1966 -67	1967 -68	1968 -69	1969 -70	Total 65-70
1. Ammonium Sulphate	—	—	—	—	167	167	50	90	90	90	90	410
2. Ammonium Nitrate	—	—	—	—	—	—	103	103	103	103	103	515
3. Ammonium Sulphate Nitrate	—	—	—	—	—	—	—	—	—	—	412	412
4. Ammonium Chloride	—	—	—	—	—	—	—	—	58	58	58	174
5. Diammonium Phosphate	—	—	—	—	—	—	—	—	—	—	183	183
6. Urea	117	117	287	357	357	1235	59	59	100	191	232	641
7. Single Superphosphate	—	—	—	—	—	—	54	54	54	54	54	270
8. Triple Superphosphate	32	152	152	307	307	950	—	—	155	155	155	465
9. NPK-15-15-15	—	—	—	150	294	444	—	—	—	—	—	—

110. The projects for the setting up of the first Urea plant at Ghorasal in East Pakistan and the Triple Superphosphate plant at Khulna are ready for implementation. The U.N. Special Fund has accepted Government's request for assistance in the preparation of detailed feasibility reports for the projects and promotion work for the effective and better utilization of fertilizers. U.N. Special Fund experts are scheduled to start their work in the immediate future.

111. The production of fertilizers is projected, according to the programme stated above to rise to 2,500,000 tons in terms of Ammonium Sulphate and 550,000 tons in terms of triple superphosphate. In addition a beginning will be made with the production of complex (NPK fertilizers in East Pakistan). Investment during the Plan period is estimated at Rs. 1,400 million (Rs. 850 million in East Pakistan and R. 550 million in West Pakistan).

Heavy Water

112. Heavy water is one of the moderators used in the Atomic Reactors and is at present considered to be the most suitable moderator. Generally, hydrogen sulphide process is used for the production of heavy water.

113. Consultants of International repute have been engaged by the Pakistan Atomic Energy Commission to investigate the possibilities of manufacturing heavy water as a by-product in the natural gas fertilizer factories. This process is said to be cheaper than the conventional one.

114. It is proposed to produce heavy water (D2O) in the Government financed sector during the Third Plan period which will be used in the Atomic Power Reactor. A provision of Rs. 15 million has been made for this purpose in the Plan.

Pharmaceuticals, Antibiotics and Fine Chemicals

115. In spite of the development of considerable indigenous capacity in the country for production of drugs and medicines such as glanicals, syrups, tinctures, tablets and ampoules devoted mainly to processing and repacking imported ingredients and drugs, imports of patented and proprietory medicines have increased from Rs. 60 million in 1960 to Rs. 105 million in 1964. Production capacity for the basic manufacture of penicillin, vaccines and sera, chloramphenicols and INH has been developed and is partly meeting the country's requirements. Permissions have been given for the establishment of a number of units both in East and West Pakistan, some of which will be set up in collaboration with foreign participants, for the basic manufacture of drugs from indigenous raw materials and imported intermediates for items such as anti-T.B. drugs, anti-malarial drugs, anti-dysentery drugs, etc. during the Second Plan period; these units are in varying stages of completion. A streptomycine factory is being set up in East Pakistan and if expected to go into production in 1966. Basic production of sulpha, anti-T.B. and anti-malarial drugs will be undertaken in the factory (jointly set up by EPIDC with foreign manufacturers of repute) at Dacca. During the Third Plan period basic manufacture of drugs from indigenous raw materials and imported intermediates by the private sector preferably in collaboration with foreign manufacturers of repute will be encouraged.

Products of Petroleum, Coal and Gas

116. The consumption of petroleum products, lubricants and greases, asphalt and bitumen is estimated at a total of 3.55 million tons in 1965; 2.57 million tons in West Pakistan and 0.98 million tons in East Pakistan. It is expected to rise by 1970 to 4.72 million tons; 3.03 million tons in West Pakistan and 1.69 million tons in East Pakistan, an overall consumption increase of 33 per cent; 17 per cent in West Pakistan and 73 per cent in East Pakistan, reflecting the more rapid indus-

trial growth envisioned for East Pakistan in the Third Plan period. The Second Plan has marked the beginning of the setting up of oil refining capacity based on imported crude by private enterprise both local and foreign, to bridge the gap between indigenous production and refining of oil, and the national requirements. The first such refinery with a capacity of 1.5 million tons went into production at Karachi in November 1962. The capacity has been expanded to 2.4 million tons. Another refinery with a capacity of 0.5 million tons is under implementation at Karachi and a refinery with a capacity of 1 million tons is under installation at Chittagong. By 1967 the refining capacity in the country will aggregate 4.3 million tons including 0.4 million tons for the refining of indigenous crude. The construction of local refineries provides a focal point for the development of petro-chemical industry.

117. During the Second Plan period a beginning has also been made with marketing of refinery products by national companies. Their operations during the Third Plan period will be expanded.

118. Provision is made in the Plan for an investment of Rs. 150 million in completing the refineries already in hand and in the expansion of capacity to meet as nearly as practicable the full national requirements by 1970.

Coal Carbonisation

119. Production of coal is expected to increase from 15 lac tons to 30 lac tons by 1969-70. Demand for coal as such will ensure the sale of increased production either as coal or as briquetts. Coal fines can be better utilized in some processed form. During the Plan period low temperature coal carbonisation should be undertaken which would help to promote the utilization of coal and also yield a number of by-products including derivatives for the production of dyes, industrial chemicals and insecticides, etc.

Petro-chemical Industries

120. The large reserves of natural gas, set out in the Chapter on Fuels and Minerals, and the by-products of oil refining together provide significant raw material resources within the country for the development of petro-chemical industries. The group of petro-chemical industries is an almost universal supplier of intermediate and finished materials for other industries and for consumption. The development of these industries with their ability to substitute for metals and wood is of special importance to Pakistan.

121. During the Second Plan units for the production of 5,000 tons each of PVC and Polyacrylonitrile fibres were sanctioned to make some use of natural gas for the production of petro-chemicals other than nitrogenous fertilizers. A unit for the production of 5,000 tons of polyethylene, 3,000 tons of methanol and 2,150

tons of urea formaldehyde resin was also sanctioned based in the main on utilisation of molasses. It is established however that the production of these items from the refinery by-products would be of greater advantage.

122. Investigations were made during the Second Plan by qualified Consultants into the prospects for the economic development of petro-chemical industries taking into account the present and likely availability of indigenous resources of raw materials. The Consultants have prepared a plan for the future development of petro-chemicals as complexes in both provinces to be completed by 1980. The complexes would use a combination of natural gas and refinery by-products and in the first phase certain imported intermediates. The production programme in terms of principal items is envisaged as follows:

('000' *tons*)

Material	1970		1980	
	E. Pakistan	W. Pakistan	E. Pakistan	W. Pakistan
Plastics and Resins	47,000	47,000	116,000	105,700
Synthetic Rubber	10,000	25,000	12,000	35,000
Synthetic Fibres	8,000	10,000	19,000	30,000
Insecticides	6,000	6,000	11,000	14,000
Other Chemical Products	79,900	87,200	138,700	156,000

123. The Plan prepared by the Consultants was reviewed and generally endorsed by U.N. Special Fund experts.

124. The interdependence of the production of various petro-chemicals calls for the closest co-ordination in the planning, setting up and successful co-operation of the capacities proposed to be created. Pakistan will be assisted in such coordination by experts from the UN Special Fund. A systematic market research and market development programme will be conducted through the persuit of end-use studies by experts available under the UN assistance programme and by such other Consultants as may be necessary. Detailed projects for the implementation of the petro-chemical development will then be carried out. Location of the petro-chemical manufacturing units will be a factor of key importance to their success. Present investigations show that the location of industrial units should be contiguous or as near as practicable to the location of the main gas recovery and steam cracking facilities which in turn have to be close to the oil refineries.

125. Negotiations have also been in progress between Pakistan, Iran and Turkey during the last few months with a view to achieving maximum mutually profitable collaboration between the RCD countries for the speedy and effective development of industries in general and petro-chemical industries in particular in

the region. The conclusions reached from these negotiations and as a result of the market development programme may warrant certain adjustments in actual kinds and quantities of petro-chemicals to be produced in Pakistan. Such adjustments will be made as and when required.

126. The setting up of petro-chemical complexes must be preceded, but not by too long, by the development of secondary and tertiary industries which transform petro-chemicals into marketable products for industry and consumer use. In general, the producers of petro-chemicals or petro-chemical intermediates capable of being fabricated into finished or intermediate goods by injection, extrusion, spinning, calendaring, laminating and other similar operations. will not be permitted to process more than 25 per cent of their production. The present petro-chemical fabrication capacity in the country is about 20,000 tons, representing about 10 per cent of the capacity that will be required to process the output of the Petro-chemical complexes in the first phase. The setting up of additional petro-chemical fabrication capacity will be promoted during the Third Plan but this will be so timed as to be available only shortly before the production of petro-chemicals from the basic units is projected to materialise.

127. The Plan provides for an investment of Rs. 826 million in the setting up of the petro-chemical manufacturing capacity and the fabrication capacity.

Non-Metallic Mineral Products

128. West Pakistan is rich in the non-metallic mineral wealth which serves as a raw material for the production of items such as cement, bricks, tiles, glass, pottery, fire bricks, etc. In East Pakistan such mineral resources are scarce but clay, sand and recently discovered large deposits of lime stone will permit expansion of existing units and creation of new capacities during Third Plan period.

Cement

129. The production of cement which was 1.05 million tons in 1959-60, rose to 1.45 million tons in 1963-64 and is estimated at 2.07 million tons in 1964-65. The completion of the capacities sanctioned during the Second Plan will raise the production to 3.59 million tons by 1967.

130. The Second Plan period has generally been characterised by shortage of cement both in East and West Pakistan, more particularly in East Pakistan. The 1964-65 consumption of cement is estimated at 3 million tons which incidentally was the Second Plan target for production. The consumption of 3 million tons estimated for 1964-65 will include about 1 million tons of imported supplies.

131. The production target of 6 million tons for 1969-70 is based on the Second Plan experience which has shown that an investment of Rs. 2,500 in deve-

lopment requires one ton of cement. A detailed study on the requirements of cement in both wings of the country in the light of development plans for 1965-70 is now in progress. The final target will be determined when the results of the study become available. In the meantime it is visualised that cement requirements of East Pakistan will be of the order of at least 2 million tons by 1970 and of West Pakistan between 3.5 to 4 million tons.

132. While the development of cement capacity in West Pakistan presents no problem except that of the foreign exchange required, the availability of raw materials principally limestone for the production of cement in East Pakistan is still under investigation. There is only one cement factory in East Pakistan at present which has a capacity of 150,000 tons but the production has not exceeded 90,000 tons. The factory is dependent on supplies of raw materials from India which have not been forthcoming in adequate quantity. Proposals for the setting up of a capacity to produce 600,000 tons of cement from clinker supplied from West Pakistan or imported from abroad will be pursued during the Third Plan period. The Government financed sector in East Pakistan includes the setting up of cement production capacity from indigenous raw materials as early as the deposits are proved and their exploitation techniques are established.

133. The Plan makes a provision of Rs. 540 million to reach the production of 6 million tons in 1969-70.

Refractories

134. The refractory industry in Pakistan is in its infancy. The annual requirements of fire bricks made of silica, magnesites, chrome and alumina are estimated at 40,000 tons per annum for the steel mills and 15,000 tons per annum for cement, glass, foundries and power houses, etc. The setting up of capacity for the production of high grade refractories will be favoured during the Third Plan.

BASIC METALS

Steel

135. Imports of steel which were 364,000 tons in 1959-60 rose to 830,000 tons by 1963-64 and are progressively increasing. A steel mill to produce 150,000 tons of ingots is under construction at Chittagong and is scheduled to come into production in 1967. Plans for the setting up of a 500,000 tons of ingot steel mill at Karachi are ready and it is expected that financing arrangements will be signed in June 1965. Production from this mill should be available by about 1970.

136. The requirements of steel by 1970 are estimated at a minimum of 1.5 million tons (1 million tons in West Pakistan and 0.5 million tons in East Pakistan).

137. Feasibility studies for expanding the Chittagong Steel Mills to meet at least a part of the increasing requirements are in progress. Consideration will be

given during the Plan period to the setting up of a second steel mill in East Pakistan to the extent to which the requirements cannot be met by expanding the Chittagong steel mills. In West Pakistan the entire dependence will continue to be on imports until 1970. While the setting up of the Karachi Steel Mill will be vigorously pursued, as has been pointed out in the Chapter on Fuels and Minerals, the prospects for setting up an integrated steel mill based on indigenous iron ore have brightened up. The Third Plan includes provision for taking in hand the setting up of a Second steel mill in West Pakistan based on indigenous resources.

Special Steel

138. The project to set up capacity for the production of special steel has been sanctioned in the private sector. This project will provide special and alloy steel to the engineering industries in general and to industries engaged on the production of machinery and machine tools in particular. Additional capacity for the production of special and alloy steel will be created during the Plan period as required.

Aluminium and Copper

139. Like steel the country depends entirely on imports of aluminium and copper. Deposits of bauxites as also of copper ore have been established. The possibility of economic production of aluminium and copper from these deposits will be further pursued during the Third Plan period. Consideration will at the same time be given to the setting up of an aluminium plant based on imported alumina. The production of aluminium is determined primarily by the cost at which electricity can be made available. Investigations will be made into the possibility of using indigenous coal for the production of power at cheap rates and in bulk for use in such an aluminium smelting plant.

METAL PRODUCT INDUSTRIES

Agricultural tools and implements

140. Agricultural tools and implements are made in crude form on small scale all over the country. There are identical and composite workshops as well which are manufacturing implements such as sugarcane crushers, chaff machines, sardheri ploughs, rabidrills, cotton drills, ridgers, rice weeders, drill pedal threshers, hand-hoc tillers and a number of other implements.

141. The need for improvement of quality of these tools and implements and development of their capacity during the Third Plan period is strongly recommended. A sum of Rs. 40 million is provided for this purpose.

Steel structure

142. Fabrication of basic metals into structural products for bridges, factories and godowns, residential, commercial and utility buildings needs encouragement.

The present capacity in the country is negligible and not much interest has been shown by the private sector in this industry during the Second Plan period mainly due to delay in development of basic steel production capacity in the country.

143. It is proposed that at least 1 lac tons capacity may be developed in each Province during the Third Plan period.

Galvanised and cast iron pipes and fittings

144. Demand of galvanised and cast iron pipes is rapidly increasing due to expansion in the construction industry and tube well programme for checking salinity and water logging; for the latter purposes experiments with fibre, glass, polyethylene, polyvinyl chloride and of other synthetic resins are in progress and these materials may prove to be more suitable than galvanised iron. In 1960 there were only two G.I. Pipe manufacturing units in the country with a total capacity of about 15 thousand tons. Cast iron pipes were also manufactured in small quantities in a number of cast iron foundries.

145. During the Second Plan period three new units have been sanctioned in East Pakistan and six in West Pakistan with the result the total installed and sanctioned capacity of G.I. Pipe has increased to 18.3 thousand tons and 55.6 thousand tons respectively. The installed and sanctioned capacity of cast iron pipe is 2.4 thousand tons in East Pakistan and 18.2 thousand tons in West Pakistan.

146. It is proposed that additional capacity of 20 thousand tons of G.I. Pipe may be developed in East Pakistan and 5.5 thousand tons in West Pakistan by 1970 to meet the growing demand. It will also be essential to develop additional capacity of cast iron pipe industry in the country.

Metal Wire and Wire products

147. These industries include manufacture of ferrous and non-ferrous wires and their products such as spring, netting, barbed wire, wire nails, wire ropes etc.

148. The total installed and sanctioned capacity of steel wire was about 26 thousand tons and non-ferrous wire about 3.7 thousand tons in December 1964. These capacities may need to be increased to 46 thousand tons of steel wire and 8 thousand tons of non-ferrous wire by 1970. At present wires worth Rs. 25 million are imported annually, which may be replaced gradually by developing local capacity.

149. The capacity of stay wire and wire rope and other wire products such as wire netting and wire nails may also have to be developed to replace imports and to meet growing demand of these products in the country.

Cutlery

150. It is one of the promising industries for export. In 1963-64 cutlery worth Rs. 4.4 million was exported to foreign countries, which is expected to rise to

Rs. 10 million by 1970. The industry is largely based on imported raw materials and is operated in small and medium scales in units mostly located in Wazirabad, Gujranwala, Gujrat and Sialkot in West Pakistan. The total production was roughly worth Rs. 7.5 million in West Pakistan and Rs. 2 million in East Pakistan in 1964.

151. A sum of Rs. 17 million has been provided for development of this industry during the Third Plan period.

Hand and Small tools

152. In spite of the fact that some capacity of hand tools such as spanners, files, twist drills, hack saw and hack saw blades etc., has already been developed in the country, the country is still importing hand and small tools worth about Rs. 20 million per annum from abroad. The demand of these tools will keep on increasing with the further development in industrial, agricultural and transport and communication sectors. It is, therefore, essential to provide an amount of Rs. 30 million for the development of this industry during the Third Plan period.

Meters (non-electrical)

153. At present there is a capacity of only 40 thousand number of gas, water and steam meters in West Pakistan. No capacity exists in East Pakistan. The present capacity is not sufficient to meet the country's requirements and meters worth Rs. 13 lacs were imported during 1963.

154. A sum of Rs. 15 million has, therefore, been provided to raise the meter manufacturing capacity to 1.5 lacs in each Province.

Metal containers and drums

155. Although the capacity of metal containers, drums and tins has been raised from 20 million number in 1960 to 100 million number by now, it is not sufficient enough to meet the country's fast growing demands and the balance is met by an import worth Rs. 6 million per annum. This industry is totally based on imported raw materials but with the development of steel production capacity, a portion of the requirements will be available locally.

156. The present capacity may have to be doubled by 1970, for which a sum of Rs. 30 million has been provided in the Third Plan.

Aluminium and enamelled utensils and domestic hardware

157. The present installed and sanctioned capacity of these articles is about 12 thousand tons per annum. New capacity may have to be created specially for manufacture of kitchenware and domestic hardware made of stainless steel for which the present capacity is not sufficient to meet the demand. An export target of these articles worth Rs. 2.5 million has been fixed for 1970 and a total amount

of Rs. 23 million has been provided in the Third Plan for the development of this industry.

Machinery Manufacturing

158. Major emphasis is laid by the Third Plan on shifting the emphasis in industrial development from the production of consumer goods to the establishment of industries for the production of machinery and other capital goods. The object is to reduce the country's dependence on foreign assistance for the import of capital goods and to assist in speedy development.

159. In West Pakistan in the Government financed sector a machine tool factory estimated to cost Rs. 116 million and to produce lathes, milling machines, boring machines, grinding machines, shapers, transmission gears and rear axles for trucks and other automobiles, textile spinning machinery and textile machine spares. The factory will be fully equipped with the latest equipment for die casting, heat treatment and forging facilities. During the Third Plan a heavy machinery complex will also be set up in West Pakistan to produce mechanical parts of diesel and electric locomotives, railway wagons, wheels and axles, road building equipment such as road rollers, bulldozers, etc., machinery for tubewells and cement factories and equipment for fertilizer factories, refineries and petro-chemical industries, boilers and heat exchangers and machinery for chemical industries and food industries. This will involve an investment of about Rs. 215 million.

160. In East Pakistan during the same period a machine tool and machinery manufacturing factory will be set up at an estimated cost of Rs. 238 million. In addition to this project initiated in the Government financed sector private enterprise will continue to be encouraged to meet the balance of the country's requirements.

161. A sizeable and growing number of machinery manufacture already exists in Pakistan, and their products, notably pumps, small and medium oil engines, cement mixers, and other construction machinery, contribute substantially in this sector. There is an export potential for some of their products. It will be a firm management policy and objective of the new and sophisticated machine tool and machinery industries to affect the closest co-operative association with existing firms in the private sector and to collaborate in their manufacture and marketing programme where joint economies are evident. Moreover, active participation by private sector representatives of major private producers and chambers of commerce will be solicited in the formulation of product lines to be undertaken in the new industries. A special liaison office will be established in each major industrial trading centre and will be staffed with qualified sales-engineer to guide market development and the collaboration efforts mentioned above.

162. The management of these new firms will act to place special emphasis on the manufacture of machinery and equipment for the increased mechanization

and productivity of agriculture. Liaison will be established and maintained on a continuing basis with the A.D.C., WAPDA, and other elements prominent in agricultural planning and implementation.

Electrical Machinery

163. Sizeable capacity has been sanctioned in the private sector for air-conditioners and refrigerators, dry cells and battery accumulators, electric lamps, electric appliances, accessories, fittings, measuring instruments, motors, fans switch gears, transformers, etc. Private sector investment is directed, however, by and large to meeting the consumer requirements in these items. While the private sector will continue to be encouraged to operate light electrical industries, the Plan lays emphasis on the production of a heavy electrical machinery such as high tension motors and generators, high tension transformers, capacitors, frequency converters and electrical equipment and machinery for special goods. The heavy items of production in this group will be taken up during the Plan period through a heavy electrical complex to be promoted in the government financed sector in West Pakistan. Detailed plans for the implementation of the heavy electrical complex which is estimated to cost Rs. 150 million are presently under preparation.

164. For East Pakistan also plans are under preparation for an electrical machinery manufacturing factory.

Wires and Cables

165. A project to produce 6,440 tons of wires and cables sanctioned early in the 2nd Plan in the private sector to meet the country's demands estimated for 1965 did not materialise. The country has, therefore, to continue to rely heavily on imports for the transmission and distribution of power. The existing capacity is for the production of about 1900 tons of copper conductors, 500 tons of insulated wires and cables, and 1600 tons of copper enamelled wire. A study to determine the requirements of wires and cables is presently in progress but on a rough estimate the requirements are likely to be about 35,000 tons. Capacity to produce wires and cables, preferably from imported ingots, not rods, will be created during the Third Plan period.

Radio Receivers

166. No sanctions for the assembly of radio receivers will be given during the Plan period. The production of components and parts will, however, receive encouragement.

Television Receivers

167. The production of whole television receivers within the country during the Plan period may not perhaps be practicable. Encouragement will, however, be

given to the import of components that cannot be produced within the country and to the assembly of the television sets within the country.

TRANSPORT EQUIPMENT

Mechanically propelled vehicles and components

168. Commercial vehicles (trucks and buses) in operation in the country were 31,140 in 1959-60; 5,010 in East Pakistan and 26,130 in West Pakistan. Their number is expected to increase to about 52,000 in 1964-65; 11,000 in East Pakistan and 41,000 in West Pakistan reflecting an increase of 73 per cent on an All Pakistan basis.

169. With the accelerated and spreading development activity envisaged for the Third Plan, road transport is destined to play an increasingly important role both for the carrying of passengers and of goods. The requirements of trucks and buses are estimated at 7,000 trucks and buses now rising to about 10,000 in 1970. Production of trucks and buses within the country, apart from body building is by and large an assembly operation. During the Second Plan a project to undertake progressive manufacture of 4,000 trucks and bus engines and chassis within the country has been sanctioned. Additional capacity for manufacturing will be created during the Plan period to meet the national requirements and also to provide an export potential.

Passenger Cars

170. About 50,000 passenger cars were in use in the country in 1959-60. The annual absorption capacity is estimated at 4,000 units. There will be an increase of a minimum of 10 per cent per annum during the Third Plan. The average annual requirements during the Third Plan period will thus be about 5,000 cars.

171. There is a multiplicity of makes and models of cars in use in Pakistan. To promote progressive manufacture of cars within the country the first step during the Plan period will be to determine and standardise on the production of one or two vehicles to be produced to suit national requirements. Once this is done, progressive manufacture of the standardised cars will be started during the Plan period.

Jeeps

172. Progressive manufacture of jeeps is already in progress at Karachi. The unit is capable of producing 2,500 jeeps per annum. Consideration to the creation of additional capacity will be given to the extent that the existing factory cannot meet the full requirements of the country.

Motor-cycles, Scooters and Tri-wheelers

173. The capacity already sanctioned aggregates 7,000 vehicles per annum, 1,000 in East Pakistan and 6,000 in West Pakistan. This capacity is adequate for

meeting the present requirements. Expansion during the Plan period will be undertaken only where new capacity provides greater scope of indigenous manufacture components.

Bicycles

174. Adequate capacity exists in the country for meeting the requirements of bicycles. The industry, however, has an export potential. The existing units will be modernized to promote exports and complementarity will be promoted between small and large sized units particularly in the manufacture of components. Additional capacity may be sanctioned only in East Pakistan.

Shipbuilding and Ship-repairs

175. In addition to the role that the country must play in international shipping, the geographical location of the two wings of the country makes the provision and servicing of a fully equipped shipping facility a matter of the highest importance to the national economy.

176. The Karachi Shipyard and Engineering Works continues to play an effective role in ship-repairs and has also undertaken the construction of small vessels for port duties, for inland water transport and for the fishing industry. A beginning has just been made with the construction of a 10,750 tons and 504 ft. long ocean going ship. This will be the first of many ships to be built by the Yard. Provision is made in the Plan for the expansion of the shipbuilding facilities.

177. In East Pakistan, in addition to the importance of servicing ocean transport, special importance attaches to the inland water transport which virtually is the life-line for the development of the economy. The Khulna Shipyards and the Narayanganj Dockyards have been assisting in these tasks. The setting up of Shipyard and heavy steel structures works at Chittagong will be completed in the Third Plan. The Chittagong Shipyard will provide facilities for the building of vessels for inland transport also. Diesel engines for mechanising inland transport in East Pakistan will also be produced locally.

178. Private boat building and repairs yards in East Pakistan will continue to be encouraged and new units will be set up in the Third Plan to meet the growing demand.

MISCELLANEOUS INDUSTRIES

179. This category includes a large number of residual industries which are of insufficient size to be individually treated. These include construction and building materials, utilization of industrial, urban and agricultural wastes, the film industry and others.

Building Materials, Components and Construction

180. This industry hardly exists as such in Pakistan today. Only a few producers and constructors exist. Essentially 100 per cent of fittings and fixtures installed

in modern private and government buildings are bought with foreign exchange.

181. Locally manufactured building components such as doors, hardware, plumbing, electrical accessories, casements and kitchen fixtures are almost universally inferior, conform to no standard, are inefficiently manufactured, yet in many cases are more expensive than imported substitutes bought on bonus vouchers. This situation clearly calls for change as a matter of high priority by stimulating the entry of new elements into this field; by setting standards; by lowering cost; and by rationalizing the programmes under which building and construction is undertaken in private and public sectors. These programmes presently are haphazard and are characterized by poor co-ordination, inadequate control, duplication of responsibility, conflicting objectives and inadequate staffing.

182. Construction methods are almost universally primitive and of low productivity and uncertain quality. Newly completed buildings frequently evidence alarming deterioration as a consequence of poor building methods, poorly supervised. Moreover, construction progress is retarded by the uncertain performance of unqualified contractors, and capital in "on-going" projects remains unproductive over extended periods on this account.

183. Clearly, the problem will not be solved by formation of standards and the establishment of industries to produce construction components. But these measures will contribute positively. Basic reforms in organization and administration cannot be treated here.

184. Specific building materials industries will be encouraged during the Third Five-Year Plan to produce standard components which utilize the maximum indigenous materials in combination with minimum imports where essential.

185. Specific opportunities will flow from market research and end-use studies which will be undertaken during the Third Five-Year Plan. Major opportunities are anticipated in manufacturing processes which combine petrochemically-based adhesives, coatings, laminations, sheets, films and foams with local chipboard, fibreboard, paper, cement-asbestos sheets, gypsum board and with wood. Individual opportunities in this field will be incorporated in the Industrial Investment Schedule as they are determined.

186. Hardware, locks, hinges, water fixtures, plastic water supply, waste drain and vent piping industry based on new materials will be encouraged.

187. Fibreglass laminates for roof water-tanks, and other appropriate housing components will be explored and opportunities illuminated. Other Miscellaneous Industries, though minor in comparison with the building material and construction industry will be encouraged and undertaken as their formulation into economically viable projects justifies their sanction. Among these are the following:

City Refuse Conversion to Organic Manure

188. A study is in progress to determine the feasibility of this process in large cities. A favourable outcome will result in appropriate action to stimulate appropriate project preparation activity.

Agricultural and Industrial Waste Conversion

189. Current projects to manufacture paper from bagasse, grasses, and bamboo are in hand. Additional specific investment opportunities for use of industrial waste will be encouraged and sanctioned as they prove sound and economically viable.

190. Research is constantly demonstrating the wisdom of the adage—produce wealth from waste. There is a wide field of presently unutilised waste from agricultural including forests and fisheries and from industries. Efforts to intensify research to find commercially economic use for the waste will be intensified during the Plan period.

OTHER MISCELLANEOUS INDUSTRIES

Film Industry

191. The industry is important both for its cultural impact and national integration and also as saver of foreign exchange and a potential earner of it. Efforts will be made to improve the quality of and to produce more film in the country. The Plan envisages setting up of a Film Institute for training film technicians, artists and musicians, etc., to improve the quality of films and also provides for balancing, modernisation and expansion of studios, laboratories and cinema houses. The Plan envisages a total investment of Rs. 94 million in film industry out of which Rs. 25 million will be in the Government financed sector in East Pakistan. Rs. 37 million in West Pakistan and Rs. 32 million in East Pakistan are expected to be invested by the private sector.

Jute Baling

192. The present estimated jute baling capacity (both pucca and kutcha) at the end of the Second Plan is estimated at 7 million bales. Raw jute production target for the Third Plan is 7.8 million bales out of which about 4.5 million bales are expected to be consumed in the country including non-mill uses by 1969-70, leaving an exportable surplus of 3.3 million bales. The Plan provides Rs. 8 million (4 million in foreign exchange) for expansion of jute baling capacity by 0.8 million bales by 1969-70. A provision of Rs. 3 million (Rs. 2.5 million in foreign exchange) is made for necessary modernization.

Cotton Ginning

193. The importance of the nature and quality of the ginning operation in terms of its impact on the quality and value both within the country and in foreign

markets of cotton cannot be over-emphasized. Steps to modernize the ginning industry mainly through the replacement of worn out and obsolete machinery were initiated during the Second Plan and are proposed to be continued during the Third Plan period.

Surgical and other instruments

194. The surgical industry is mainly concentrated in Sialkot area of West Pakistan. This industry exports about 90 per cent of its products, which are of superior quality. Application of new methods is envisaged to standardize the products.

195. The capacity sanctioned upto December 1964, totalled Rs. 9.71 million and was for production of Hospital and medical equipment, surgical instrument and artificial limbs.

196. Additional capacity to produce goods like surgical medical and dental equipments worth Rs. 30.0 million is proposed to be developed during 1965-70. This will involve a capital investment of Rs. 20.7 million in large, medium and small units.

197. Surgical goods worth Rs. 2.5 million were exported during 1963-64 and an export projection of Rs. 25.0 million has been made for 1969-70.

Sports goods

198. This industry provides employment opportunity to many people and earns foreign exchange. The products of this industry, which is concentrated in Sialkot are of high quality and enjoy good reputation abroad.

199. Upto December, 1964, this industry was accorded sanction to produce goods worth Rs. 20.00 million. The foreign exchange earning through the export of sports goods during 1963-64 was of the order of Rs. 19.00 million and an earning of Rs. 30 million is envisaged during 1965-70.

200. Additional capacity to produce goods worth Rs. 17.5 million through large, medium and small units are to be created during the Third Plan period, which will entail an investment of Rs. 16.4 million, inclusive of balancing modernisation and replacement cost of the existing units.

Industrial Estates

201. The Second Plan emphasised the role of Industrial Estates as an institutional tool for accelerating industrialization.

202. In East Pakistan at the end of the Second Plan schemes for setting up of 5 large industrial estates in the greater Dacca and Narayanganj Area by the D.I.T., Dacca, 4 in Chittagong by CDA and one at Khulna by KDA which are at

various stages of implementation will be completed in the Third Plan period. Special attention was given in the Second Plan to the creation of small and medium industries estates. Thirteen small industries estates had been created and work on six more estates were on progress which would be completed in the Second year of the Third Plan.

203. In West Pakistan at the end of the Second Plan work on seven large industrial estates at Sukkur, Multan, Jhelum, Nowshera, Rahimyarkhan, and Sargodha and small industrial estates at Gujranwala, Sialkot, Peshawar, Bahawalpur, Quetta, Larkana and Sukkur were in progress and will be completed in the second year of the Third Plan. Besides three large and a few small industrial estates will be set up at suitable places in West Pakistan during 1965-70.

204. The Plan provides for Rs. 160 million and Rs. 52 million in the Government financed sector for East and West Pakistan respectively for completion of projects carried forward from the Second Plan and creation of new large and small industrial estates during the Third Plan period.

EXPECTED RESULTS

205. The table below sets out the tentative physical targets for the industrial sector during the Third Plan.

Production/Items	Unit	Production estimates 1964-65	Production target 1969-70		
			All Pakistan	East Pakistan	West Pakistan
1	2	3	4	5	6
Food Manufacturing:					
White sugar	Th. tons	312	640	230	410
Vegetable ghee		90	140	25	115
Cigarettes	Million	18,500	30,000	11,500	18,500
Tea	Million lbs.	64	74	74	—
Textiles:					
Cotton yarn	,,	520	720	234	486
Jute:					
a) Hessian/sacking	Thousand tons	331	800	768	32
b) Broad loom products	,,	10	120	96	24
Paper and Boards:					
Writing and printing paper	,,	47	100	65	35
Boards (hard/particle/chip, etc.)	,,	27	100	30	70
Newsprint and mechanical paper	,,	42	100	65	35

Production/Items	Unit	Production estimates 1964-65	Production target 1969-70		
			All Pakistan	East Pakistan	West Pakistan
1	2	3	4	5	6
Chemical Industries:					
Nitrogenous fertilizers (in terms of ammonium sulphate)	Th. tons	550	2,500	1,300	1,200
Phosphatic fertilizers (in terms of triple superphosphate)	,,	7	550	350	200
Soda ash		28	172	36	136
Caustic soda		15	90	35	55
Sulphuric acid	,,	16	600	280	320
Petrochemicals	,,	—	329	151	178
Non-Metallic Minerals:					
Cement	,,	2,000	6,000	2,000	4,000
Basic Metal:					
Steel	Thousand ingot tons	—	1,200	300	900
Electrical Machinery:					
a) Wires and cables	Th. tons	4	35	15	20
b) Heavy electrical equipment	Million Rs.	N.A.	120	30	90
Machinery:					
Machine tool and Heavy machinery (complex)	-do-	N.A.	262	102	160

206. The programme is expected to generate about a million industrial employment opportunities and to avoid any increase in foreign exchange expenditure on the import of consumer goods. Investment in heavy industry is of necessity characterised by long gestation period. The full impact of the investments made during this Plan period in heavy industries and in petro-chemicals will be visible in the Fourth and succeeding Plan periods. An input output table for industries is, however, under preparation to serve as a guide in the implementation of a balanced Plan, for ensuring that the import bill for industrial raw materials does not outstrip the foreign exchange savings derived through replacement of imports.

CHAPTER XXII

FUELS AND MINERALS

1. Accelerated exploration and development of Pakistan mineral and fuel resources is necessary to meet the increasing need for utilities and of a raw material inputs for new industries. Moreover, industries based on exploitation of natural resources are of particular importance to Pakistan in that they require a minimum recurrent foreign exchange and produce intermediate materials which substitute for imports.

2. Since independence, a concerted search has revealed an impressive inventory of natural wealth. Large deposits of natural gas, coal, iron ore, chromite, barytes, gypsum, and other minerals have been found in both wings. These resources must be exploited as fully and as rapidly as available financial resources and technical know-how permit.

3. Policies designed to stimulate the exploitation of these resources will be formulated during the Third Five-Year Plan. Methods and procedures aimed at simplifying exploitation rights will be devised and the opportunities for industrial and profitable exploitation by private entrepreneurs will be widely publicized by the Geological Survey of Pakistan.

4. Fuel is basic to the development and maintenance of the economy. Projections of primary energy requirements made in 1961 by Consultants on a conservative basis show that if 10,625 million KWH are supplied as hydel electricity towards meeting the requirements other fuels required to meet the overall needs by 1975 would be:(1)

Coal	48,00,000	tons
Natural Gas	1,54,945	million c.ft.
Petroleum	30,298	thousand barrels.

Insofar as practical the targets and policies of the Second Plan were used by the consultants as a basis for projecting primary energy requirements upto 1975. These include petroleum, natural gas, coal, peat and energy from falling water. Energy use was considered by them in several separate areas such as transport, electrical power, industrial operations, agriculture, construction, domestic and commercial fuels in these estimates.

5. An all out effort to find and develop oil, coal and gas resources is required if the import bill for fuels is not to offset the advantages gained by setting up refineries based on imported crude oil.

6. Despite present exploitation of mineral wealth, increasing import of coal and petroleum is a heavy drain on the country's foreign exchange resources. Imports of fuels cost the country roughly Rs. 109 million in 1954, but increased to Rs. 354 million in 1959-60 and to about Rs. 446 million in 1963-64. The import of petroleum

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(1) Projection by A. D. Little, Cambridge, Mass.

has increased from Rs. 75 million in 1954-55 to Rs. 404 million in 1963-64 and of coal from Rs. 34 million to Rs. 42 million. This is in spite of the replacement of fuel oil by natural gas equivalent to 34,74,000 tons valued at Rs. 231.3 million between July 1955 and August 1963.

Progress during the First and Second Plan periods

7. During the First Five-Year Plan investment activity to survey, prospect, establish and exploit mineral resources of the country was of the order of Rs. 532 million including Rs. 11 million in geological surveys, Rs. 13 million in special investigations for selected minerals, Rs. 456 million in prospecting for oil and Rs. 49 million in the expansion of the production of coal, chromite, gypsum and salt. This investment resulted not only in the discovery of additional reserves of natural gas, but also of additional mineral deposits.

8. During the Second Plan period an investment of the order of Rs. 705 million (Rs. 315 million financed by Government and Rs. 390 million financed by private enterprise) will have been made by June 1965. The Government-financed sector includes Rs. 39 million in geological survey, Rs. 176 million in oil and gas prospecting, Rs. 54 million in the production of coal and Rs. 26 million in the transmission and distribution of natural gas. Private sector investment includes Rs. 130 million in oil and gas prospecting, Rs. 218 million in the transmission and distribution of natural gas, Rs. 30 million in the expansion of coal production and Rs. 12 million in the production of other minerals. The table below shows the estimated production of selected minerals since 1948:

TABLE 1

PRODUCTION OF FUELS AND MINERALS

Fuels/Minerals	Unit	1948-49	1954-55	1959-60	1963-64	Percentage increase in 1959-60 over 1954-55	Percentage increase in 1963-64 over 1959-60
1. Petroleum (Crude Oil)	Million Imp. Gallons	17	70	85	130	21	53
2. Natural Gas	Million Cubic Feet	—	—	25,750	54,872	—	113
3. Coal	Thousand Tons	241	544	775	1,229	42	58
4. Sea Salt		168	254	185	191	—38	3
5. Rock Salt	„	150	144	169	220	17	30
6. Chromite	„	18	25	15	8	—40	—46
7. Limestone	„	347	853	1,014	1,648	19	63
8. Silica Sand	„	1	12	27	27	125	—
9. Gypsum	„	10	30	91	172	200	90
10. Argonite	„	—	—	2.7	10.4	—	285

Source: C.S.O. and West Pakistan Mineral Directorate.

Geological Survey

9. The commencement of the Second Plan saw the Geological Survey of Pakistan as an organization severely limited by the paucity of geologists, mining engineers and other highly technical and trained manpower. Efforts during the Second Plan were intensified to fill these deficiencies. The strength of the organization in terms of officers will rise from 110 in 1960-61 to 242 in 1964-65, and of other technical staff from 362 to 662. The investment in geological investigations during the Second Plan period is estimated at Rs. 39 million.

10. Notwithstanding the severely limited availability of manpower of the required qualifications and experience, the following important programmes will have been completed by the end of the Second Plan :

(1) Geological, Mineral and Fuels Maps of Pakistan on the scale 1 : 2,000,000 will be available.

(2) Detailed geological studies supported by geo-physical surveys and drilling have been carried out in respect of salt. This has resulted in the discovery of additional reserves of salt and chromite. The reserves of salt in the Khewra Region alone have been estimated as 83 million tons. Another deposit has been proved through drilling in the Kohat District, which shows that the known reserves of rock salt in West Pakistan are almost inexhaustible.

(3) Similarly geological survey and drilling of chromite has resulted in proving additional reserves. Apart from Hindubagh, new deposits have been discovered in Kharan, Waziristan and the areas adjoining Fort Sandeman.

(4) New barytes deposits near Khuzdar and in parts of Hazara have been discovered. The reserves estimated are 1.5 million tons and 400,000 tons respectively. Additional reserves are likely to be proved as the geological mapping proceeds.

(5) Iron-ore deposits of variable composition aggregating 150 million tons have been proved in the Chichali area and of more or less the same quality in the same geological district towards Makerwal in the Mianwali District. In addition recent geological reconnaissance has resulted in the discovery of 2 separate iron-bearing formations extending over a distance of 30 miles from near Kalabagh to Khanpur in the District of Hazara. These two iron belts are composed of quality hematite ore with an average of 30-40 per cent of iron ore. The geological mapping of the areas is in progress. In addition, the possibility of locating better grade iron ore in the State of Dir has been explored and work has been taken up as part of a Special Iron & Steel Resources Survey. During the Second Plan period, a special project assisted by the United Nations to determine the prospects for the utilization of indigenous iron ore for steel-making was vigorously pursued. The final results of the U.N.-assisted project are expected to be available in the near future,

but the prospects of setting up the production of steel from this ore, a problem which has long defied solution, appear to be brightening up.

(6) Coal reserves had been estimated in 1960 at about 165 million tons in West Pakistan. Further investigations during the Second Plan have proved the reserves in West Pakistan at 335 million tons. A U.N.-assisted geological project was especially devoted to exploring fuel reserves in East Pakistan where only the existence of peat had so far been established. The final result of the investigation is still awaited but the investigations have so far proved reserves at about 168 million tons of coal around Godwana of a quality superior to that of West Pakistan coal.

(7) Deposits of Kaolinised clay apparently of commercial quantity and roughly estimated at 300,000 tons in Tharparkar District is a new discovery. During the Third Plan period, efforts will be directed to follow up the results of the geological studies and investigations referred to above.

(8) In addition to the sizeable deposits of minerals mentioned above, a regional geological mapping has also established the presence of a number of minor mineral occurrences, *e.g.*, manganese in Hazara and lead and copper in Chagai and Dir, boron near Hamun-i-Lora, phosphate, uranium and certain other radioactive minerals in the Indus River sands and in the Siwalik rocks near Rakhi Munh in the D.G. Khan district. Deposits of chloride have been located in the Kohat Division and in Dir. Deposits of onyx marble and vermiculite in commercial quantities have also been found.

THIRD PLAN PROGRAMME

11. During the Third Plan investigation for the discovery of additional and new mineral deposits will be further intensified. The objective will be to subject the mineral-bearing tracts to geological mapping on a scale 1: 250,000 during the Plan period and to conduct detailed investigations on the known but not yet explored deposits of minerals to determine their extent and quality. Research will be conducted on the known deposits of presently marginal value such as low grade chromite to evolve means for their economic utilization. The Geological Survey of Pakistan will continue to assist and support other development activities such as the investigations of groundwater resources and investigations connected with the control of salinity and waterlogging. About half of the investment in Geological Survey activities will be used on economic evaluation and utilization studies for known reserves and the remaining half will be employed on geological mapping and the search for further minerals.

Oil

12. Since independence Government has promoted the search for oil by private oil companies. Till 1964 a total investment of Rs. 596 million was made in the oil industry; Rs. 447 million by private oil companies and Rs. 149 million

by Government. In addition to continued participation with the private oil companies in prospecting for oil, Government set up in 1961 a Government sponsored corporation, the Oil & Gas Development Corporation to intensify the search. The Government also entered into an agreement with the Government of USSR for credit facilities upto Rs. 142.9 million by way of equipment and services of experts.

13. As a result of various surveys carried out by six geological parties of the Corporation (three Seismic and two Gravity parties and one Aeromagnetic party) in East and West Pakistan, useful data and information have been obtained and prospective structure discovered. Two sites for deep drilling have been selected in East Pakistan and one in West Pakistan. All necessary preparation with regard to construction of access roads provision of facilities etc., have been completed and the actual work of rigging completed and the work on deep wells at Jaldi in East Pakistan and Tut in West Pakistan was spudded in November and December, 1964.

14. Investment in oil prospecting by the Corporation will be about Rs. 139 million by 1965. The Plan makes a further provision of Rs. 276 million for the continuation of the activities of Oil and Gas Prospecting and Exploration started during the Second Plan. The activities include Geological Surveys, Aeromagnetic surveys, Gravity surveys, Seismic Surveys structural drilling, deep drilling, and electric logging. About 1,120 managerial and technical workers both foreign and Pakistani will be employed on the execution of work of prospecting and exploration of oil and gas. The shortage of manpower in senior technical grades will not be as serious during the Third Five-Year Plan as a number of Pakistani technicians have been trained under foreign experts in Pakistan and some of them were sent abroad for specialized training in various fields of oil and gas exploration.

15. While the Corporation as also the private Oil Companies have yet to strike oil in new fields, the country's production of crude oil from the Potwar oil fields which was 72 million gallons in 1955 and 82 million gallons in 1959 rose to 115 million gallons in 1964. This production, however, can meet only about 20 per cent of the country's requirements. The search for oil is being continued by six oil companies, in addition to the Oil and Gas Development Corporation, and will be further accelerated during the Third Plan period. The Plan estimates an investment of Rs. 300 million in the joint effort of oil companies and Government and makes a provision of Rs. 75 million as Government's share of the investment.

Natural Gas

16. The search for oil has established the existence of large reserves of Natural Gas at various places both in West and East Pakistan as shown in the table below. Larger reserves in known fields as also new reserves are likely to be proved as prospecting for oil continues.

TABLE 2

RESERVES OF NATURAL GAS DISCOVERED SO FAR

(Million million cubic feet)

Location of gas fields	Estimated reserves	Utilization of natural gas upto December 1964
WEST PAKISTAN:		
Sui	6.30	0.276
Mari	5.00	—
Uch	2.50	—
Dhulian	1.70	—
Khairpur	0.25	—
Khandkot	0.20	—
Zin	0.10	—
Mazarani	0.03	—
Total West Pakistan	**16.08**	**0.276**
EAST PAKISTAN		
Sylhet	0.28	* 0.18
Chattak	0.02	
Rashidpur	0.74	—
Kailash Tila	0.38	—
Titas (Brahmanbaria)	1.36	—
Habibganj	1.00	—
Total East Pakistan:	**3.78**	**0.018**
Total estimated reserves of Natural Gas in Pakistan:	**19.86**	**0.294**

* Entire gas reserves dedicated to A.B. Cement Factory, Chattak.

17. The composition of the Natural Gas discovered at various places in the country in West and East Pakistan is given below:—

TABLE 3

Gas Field	Methane	Ethane	Propane	Butane and higher	Nitrogen	Carbon-dioxide	Hydrogen sulphide Gr.100cft.	Calorific value BTU/cft.
1	2	3	4	5	6	7	8	9
WEST PAKISTAN								
Sui	90.1	0.85	0.10	0.25	3.5	4.5	92.2	935
Mari	72.3	0.2	—	—	21.5	6.5	—	637
Uch	27.25	0.7	0.3	0.3	25.2	46.2	33.5	N.A.
Dhulian	81.5	12.0	4.0	2.0	—	0.5	—	N.A.
Khairpur	12.2	0.2	0.1	—	16.9	70.6	2.0	N.A.
Khandkot	79.2	1.1	0.2	0.4	16.6	2.5	30.8	832
Zin	46.1	1.4	0.15	0.15	8.5	44.5	13.3	N.A.
Mazarani	88.0	2.0	1.7	—	8	0.3	13	926
EAST PAKISTAN								
Sylhet	96.6	2.2	2.6	—	—	—	—	990.4
Chattak Rashidpur	96.5	—	3.5	—	—	—	—	926.6
Kailash Tilas	95.99	2.54	0.81	—	0.2	—	—	999.5
Titas	97.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Habibganj	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Utilization of Natural Gas

18. The consumption of natural gas which was 1,375 million cft. in 1955, rose to 29,842 million cft. in 1960 and to 51,900 million cft. in 1964.

19. In West Pakistan the pattern of consumption in 1962-63 showed that about 36 per cent of the production was used for the generation of power about 55 per cent by industries mainly as fuel and about 9 per cent was consumed in commercial and domestic purposes. Only the Sui gas field has so far been tapped and the only use of gas as raw material for industry (as distinct from fuel) has been in the production of nitrogenous fertilizers (about 250,000 tons per annum in terms of Ammonium Sulphate) at Multan. Detailed plans are presently in preparation to utilize more gas for the production of nitrogenous fertilizers and for the production of petro-chemicals like PVC and Polyacrylonitrite. The Third Plan will see substantial advances in these directions including the use of Mari fields gas for the production of about 370,000 ton of Ammonium Sulphate per annum.

20. To promote the use of gas for the generation of electricity and as industrial fuel, transmission pipelines exist from Sui to Karachi and Sui to Multan, and from Dhulian to Rawalpindi and Wah. The newly formed Northern Gas Pipeline Co. has taken over the Sui-Multan Pipeline and the Dhulian-Rawalpindi Line, and is now engaged in setting up an integrated transmission and distribution system north of Multan. During the Third Plan period facilities for the transmission of Gas and its distribution in Lahore, Gujranwala, Jhelum and Peshawar will be provided in the northern districts of West Pakistan. In the southern districts similar facilities will be provided for the towns of Kotri, Tando Adam, Shikarpur, Larkana, Tando Mohammad Khan, Talhar, Shahdadpur and Tando Jam.

21. In East Pakistan, natural gas from the Sylhet field is in use for the generation of power and for the production of nitrogenous fertilizer, about 250,000 tons per annum in terms of ammonium sulphate. The gas for the Chattak gas field is dedicated to the production of cement. To utilize the gas from Titas, a transmission line is in the process of construction from the field to Dacca to provide for power generation and production of fertilizers en route and to supply gas for general industrial, commercial and domestic purposes in Dacca. Transmission facilities for supply of gas to Chittagong are included in the Third Plan.

22. The objective will be to use as much of the gas as possible for the production of fertilizers and petrochemicals. To ensure this detailed investigations are now in progress. Studies are being undertaken of the comparative economics of the utilization of petroleum products, natural gas and indigenous coal as fuel. The utilisation of gas as fuel will not be encouraged wherever coal can conveniently be provided, for gas is more precious as raw material for industry.

23. It is estimated that during the Third Plan period the utilization of gas will go up from about 80,000 m.cft. in 1965 to 200,000 m.cft. in 1970, of which 25

per cent will be utilized in power generation, 35 per cent as raw material for the production of fertilizers and petrochemicals, 30 per cent as fuel for industries and 10 per cent as fuel for commercial and domestic uses.

Coal

24. In West Pakistan sizeable deposits of coal are known to exist in former Baluchistan, Quetta and Kalat area, Punjab-Trans-Indus area, Salt Range and former Sind area. The heating value of coal ranges from 7,000 to 12,200 B.T.U. per pound. It is friable and relatively high in sulphur and ash content. It is unsuitable for conversion into metallurgical coke but by subjecting it to low temperature carbonization, briquetting and curing, a coke briquette can be produced which can be used in foundries and lime kilns and also in sugar mills. It can also be used in brick kilns and boiler plants and for generation of electricity.

25. Lakhra coal field discovered during the Second Plan period is a large field of shallow flat lying coal, about 80 miles north of Karachi. The first coal seam is being mined in Lailian Collieries. There are other seams below the Lailian coal bed. The Lailian coal bed lies about 120 feet below the top of the lower Ranikot formation and has been penetrated in 18 drill holes over a distance of five miles from east to west and 11 miles from north to south. The thickness of the seam ranges between 8.4 feet to 206 feet and occurs at depths from 83 to 240 feet. In an area of about 40 square miles 170,000,000 tons of coal has been estimated. The coal has a fixed carbon content of 29-48 per cent volatile matter 30-35 per cent, ash 7-25 per cent, sulphur 2-7 per cent and heating value ranges between 7,000 to 10,000 B.T.Us. per pound.

26. The search for oil in East Pakistan provided evidence pointing to the existence of coal. Geological investigations to determine the nature and extent of the deposits were intensified through a UN assisted mineral survey project. Coal of good quality was hit at a depth of 3,661 feet through drilling at Paharpur (Bogra). Further drilling revealed a total thickness of 1,212 feet. Gondwana coal was found at a depth ranging from 2,996 to 3,519 feet. It has been estimated that one foot thick coal spread over one square mile will contain 1,000,000 tons of coal reserves. The drilling at Chana Kamal proved the existence of coal at a depth ranging from 2,920 to 3,305 feet and the thickness of seam varying from one foot to 40 feet. The composite thickness of 108 feet of Gondwana bituminous coal has been proved.

27. Geological Survey, supported by drilling, has established the presence of coal in Tura formation in Lama-Kata-Bhemgarghat area of Sylhet district. There are two workable seams with an aggregate thickness of 8½ feet. The reserves have been estimated at 3,000,000 tons, assuming that the seams continue upto a depth of 100 feet. These seams extend to a distance of 10,000 feet between Lalghat and West of Takerghat. Further continuation is almost certain. The quality of coal is lignitic to sub-bituminous.

28. The preliminary report compiled by the U.N. Experts and the staff of the Geological Survey of Pakistan says that assuming the quality and quantity of coal reserves at drill holes 7 and 8 to be same as at drill holes 5 and 6 the area of 3.65 square miles covered by the four holes would contain a maximum of 165 million tons of coal at the rate of 45 million tons per square mile. The characteristics of this coal are:—

(*a*) Ash content 7 to 25 per cent,
(*b*) Volatile material 3.6 to 37.8 per cent,
(*c*) Calorific value 10,000 to 12,500 B.T.U., and
(*d*) Coke can be made from 70 per cent local coal.

29. According to the preliminary report an investment of about Rs. 315 million of which Rs. 18 million would be in foreign exchange would be needed, besides the expenditure on the improvement of railway track lines which may be about Rs. 22 million, for the commercial exploitation of coal which would result in the annual production of about 24 lakh tons over a period of 15 to 20 years. The report further reveals that in the long run there is the possibility of exporting coal after meeting the domestic requirements of the country. Provision in the Plan is accordingly made for the production and development of coal mines.

30. The table below shows the estimated reserves and analysis of coal.

TABLE 4

RANGE OF ANALYSIS OF COALS

Coal field	Probable resources Mill. tons	Moisture %	Volatile Matter %	Fixed Carbon %	Ash %	Sulphur %	Calorific value B.T.U./lbs.
West Pakistan							
Baluchistan and Kalat							
Sor Range	21.98	8.6-13.6	38.1-44.2	42.6-43.5	3.7-5.5	0.6-3.4	10400-11900
Deghari		11.3-13.6	35.1-38.8	42.2-43.3	5.4-11.5	1.4-3.5	9750-10800
Mach	15.05	7.1-120	34.5-39.4	32.4-41.5	9.6-20.3	3.2-7.4	9200-10300
Sharigh	39.90	1.7- 3.5	34.8-45.3	25.5-43.8	9.3-34.8	5.0-7.1	8500-12400
Punjab-Trans-Indus							
Makerwal	18.87	2.8-5.3	42.4-48.1	36.7-44.9	6.4-11.5	2.8-6.3	11400-12200
Punjab Cis-Indus							
Salt Range	69.70	3.2-7.6	26.3-38.8	29.8-44.8	12.3-37.7	3.5-10.7	7100-11100
Sind							
Jhimpir-Meting	25.00	15.4-29.8	29.8-39.9	31.0-36.3	8.2-14.6	3.4-7.5	7400-9800
Lakhra	170.00	N.A.	30-35	29-48	7-25	2-7	7000-10000
East Pakistan							
Bogra-Gondwana	700.00*	N.A.	32.6-37.8	N.A.	7.25	N.A.	10800-12500
Sylhet Distt.	3.00	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

* There are indications that the coal reserves may ultimately turn up as high as 1,500 million tons. Proved reserves are about 500 million tons.

31. The Plan provides for increasing the production of coal from 15,00,000 tons in 1965 to 30,00,000 tons in 1970. At present the country is spending on the average Rs. 40 to 45 million per annum in foreign exchange on the import of coal and this expenditure would increase unless indigenous production is stepped up to meet the present and increasing requirements.

32. An investment of about Rs. 304 million is planned of which Rs. 165 million would be made by the private sector. This figure may appear to be on the high side as compared to the projected output of coal in 1969-70. This is so because substantial production from deep coal mines of East Pakistan may not be realised by 1969-70. However substantial investment is necessary in the development of East Pakistan coal mines during the Third Plan period which would pay rich dividends in succeeding Plan periods. This heavy investment in collieries is justified and commensurate with long term objectives.

Peat

33. Latest estimates of peat reserves amount to over 1,000 million tons, Faridpur District 875 million tons, Sylhet district including Moulvi Bazar 35 million tons, Khulna and other districts over 90 million tons. The surveys so far conducted have indicated that the peat seam averages about 6 ft. in thickness and is overlain by clay to a depth varying from 0 to 12 ft., with an average depth of 5 ft. The entire reserves of over 1,000 million tons of wet peat would be equivalent to 143 million tons of dry peat assuming that the specific gravity of the wet and dry peat is 1 and 0.13 respectively. The Faridpur peat is reported to be highly humidified, well decomposed and disintegrated. It is very black and dense and has all the distinctive characteristics of a good fuel peat. Its properties are fairly uniform throughout the depth of the seam. Chemical analysis has given the following results:—

	Ash included	*Ash free*
Carbon	47%	55%
Hydrogen	5%	6%
Sulphur	1%	1%
Oxygen	31%	36%
Nitrogen	12%	2%
Ash	14%	—

The calorific value ranges from 6,000 to 7,000 B.T.Us. per pound.

34. Reports from experts such as M/s. Power Dufferin Technical Services, London, M/s. Lurgi of Germany and the Geological Survey of Pakistan are available on the occurrence, extent and characteristics of peat in East Pakistan. In order to explore the possibilities of utilizing the huge peat deposits of East Pakistan, feasibility reports on various aspects were prepared from the following experts/ consultants:

1. Messrs. Sandwell & Co.
   of Canada:
   Report on Extraction of Peat.

2. **Experts of Bord Na Mona of Ireland:**
   Report on the Best Method of Extraction of Peat.
3. **M/s. Netherlands Engineering Co. of Holland:**
   Report on the Dyking & Pumping of the Area of Operation and Agricultural use of Land after Depeating.

35. Efforts to exploit peat reserves have so far not registered any significant success and will be continued during the Third Plan period.

Iron Ore

36. The known iron ore resources in Pakistan are estimated at over 400 million tons but the quality of the indigenous ores has so far vitiated attempts at their utilisation for steel making. The metallic iron content of the 400 million tons of ore is about 125 million tons. Reserves of sedimentary type ore are approximately 394 million tons whereas reserves of metamorphic and lateritic type are of the order of about 3.7 and 15.4 million tons respectively. The iron contents of these qualities of ores and iron bearing materials are:

Deposits		*Percentage of iron ranges*
(*i*) Sedimentary	between	20—60
(*ii*) Contact—Metamorphic	between	35—64
(*iii*) Lateritic	between	12—25
(*iv*) Hydrothermal & Placer	between	20—65

37. The table below shows the deposits and their estimated iron content:

TABLE 5

Type of deposit	Location of deposits	Estimates of reserves	Percentage of iron
		million tons	
I. Sedimentary	i) Kalabagh/Makerwal	309.33	33—34
	ii) Sakesar/Sargodha	2.56	32
	iii) Galdanian/Hazara	60.00	15—20
	iv) Abbottabad	2.50	20—35
	v) Kangrial/Peshawar	20.00	30—45
	vi) Parabek/Chitral	0.03	60
II. Metamorphic	i) Dammer Nissar	3.70	40—65
	ii) Bandergan and Baluchap-Chagai	0.02	35—54
III. Lateritic	i) Ziarat	15.00	29
	ii) Chappar/Salt Range Sargodha	0.13	13—25
	iii) Surg/Campbellpur	0.25	12—17
IV. Placer	i) Cox's Bazar	0.03	65

38. During the Second Plan the ore deposits have been subjected through a special UN assisted project to detailed mapping and studies. The largest known iron ore deposits are located in *Kalabagh-Makerwal* area and may become the principal source of iron ore for a national iron and steel industry. The ores contain carbonate, silicate and oxide iron minerals and have an average of 30 to 35 per cent iron and 15 to 25 per cent silica. The ores are classified in two principal groups of minerological compositions as

(*a*) Chamosite—Siderite (Kuch type) ores, and
(*b*) siderite—limonite—goethite—glauconite (Chichali type) ores.

The former type of ore occurs mainly in Kuch area and the later type mostly in Chitral area. An intermediate type of ore is represented by the ores of Chuglan West area of Kalabagh. This ore is primarily Chichali type ore having some altered hydrohemarite. The total reserves of Kuch type ore are at least 35 million tons whereas reserves of Chichali type ore may be over 213 million tons. The intermediate type ore may be about 52 million tons. United Nations drill holes have proved physically a total reserve of 150 million tons of Chichali ore in one of Chichali area.

39. Total available reserves of iron deposits in *Hazara region* are tentatively estimated at about 60 million tons. Galdanian and Abbottabad deposits are sedimentary layers of hematitic claystone. The ore is poor grade with high content of alumina, silica and undesirable elements like phosphorous and sulphur. Colite hematite ore of langrial is of interest as it has been laterly traced over a distance of 25 miles in sedimentary beds. Preliminary estimates of reserves are about 20 million tons of ore with an average iron content of 30—45 per cent.

40. In *Dammer Nissar* (in Drosh District of Chitral) the reserves of magnetite iron ore are of the order of 3.7 million tons. The grade of ore ranges from 36 to 46 per cent iron. At present the exploitation of this ore is considered uneconomic because of difficulties of access and high cost of transportation. In *Quetta Division* where a number of small deposits of iron ore were found (in Baluchap—Kundi and Bandegan areas of Chagai District) a laterite deposit (near Ziarat) was investigated. The average iron content was 29 per cent, alumine 30 per cent and titania 5 per cent. The composition changes abruptly both in lateral and vertical directions. The reserves are estimated at about 15 million tons in about one-fourth of the laterite bearing area.

Chichali Iron Ore

41. Preliminary report on the demonstration of Chichali ore at Leige shows that successful tests have been performed with:

(*a*) 30 per cent European ore plus 70 per cent Chichali ore,
(*b*) 20 per cent European ore plus 80 per cent Chichali ore,
(*c*) 10 per cent European ore plus 90 per cent Chichali ore,

42. The final report on the feasibility of indigenous iron ore for the production of steel is still awaited but the preliminary report shows that the production of steel from these ores is now a possibility within reach. The Third Plan should see a beginning for the setting up of an integrated steel mill to meet a part of the large gap between requirements and the production of Chittagong and Karachi Steel Mills. Investment in the exploitation of indigenous iron ore will be found from the allocations for Industry in the Third Plan.

Other Minerals

43. Large deposits of marble of different varieties have been discovered in Peshawar, Quetta and Kalat Divisions of West Pakistan. Some deposits of marble have also been located recently in the Dadu District of Hyderabad Division. Marble in the afore-mentioned three regions varies in colour from pure white, yellow, pink, grey to jet black. Green is the most common in the Chagai district of Quetta Division. Recently mining of marble attracted the active attention of private enterprise. More than 60 concessions for marble mining have been granted in different regions of West Pakistan. The principal use of marble is as building stone for both interiors and exteriors. It is also used for memorials and decorative purposes. The present demand for marble in the country in wrought form and as tiles and chips is estimated at over 6,000 tons per annum and may increase to 15,000 tons by 1970. Marble is also exported in wrought form to Italy and Japan.

44. At present, we have four marble processing units; mainly for the manufacture of slabs and tiles. The methods of quarrying and processing of marble will be modernised in the Third Plan period and efforts will also be directed to increase the quantum of processing in the marble industry. The Plan makes provision in the Government financed sector for the appointment of consultants to assist the mine owners in the formulation of development projects for marble mining and processing.

Sylhet Limestone

45. To the northwest of Chattak, limestone has been found at depths ranging between 25 to 500 feet in a six mile belt along the border of Sylhet District. The southern extension of the limestone is yet to be determined though its underground continuity upto a distance of 800 feet has been confirmed by drilling. Drilling has so far proved 20 million tons of limestone in this area. Besides this about two million tons of limestone are exposed in small hills. The limestone is of high quality and can be used not only in making cement and lime and as aggregate in construction of buildings, but also in soda ash industry, in sugar and paper mills and in the proposed steel plant at Chittagong. It has been established by geological and resistivity surveys and by drilling that the limestone continues beneath the alluvium between the hillocks. Steps will be taken during the Plan to exploit these reserves.

46. Some of the other miscellaneous minerals which will be taken up for exploitation during the Third Plan period are: white clay, China clay (Kaolin), glass sand, radioactive sand, other radio active minerals, baryte, salt and brine. These are briefly referred to below:

White Clay

47. White clay deposits are exposed in the Bijaipur area between Bhedicura and Gopalpur villages and Mymensingh District and north of Balijuri, 80 miles west of Bhedicura. The total thickness of the white clay beds ranges from 8 to 14 feet, the average being 10 feet. Estimated reserves in the hills are 200,000 tons.

China Clay (Kaolin)

48. Deposits of white china clay have been found in Nagar Parkar area near Didwa, Prodhora and Dhed Vero villages at depths ranging between 5—100 feet. These deposits are lens shaped and range from a few inches to about 10 feet in thickness. On being fired to 1,150c° the clay produced good white colour and did not become steel hard, indicating its refractory properties. It contains about 58 per cent alumina. Inferior quality yellow and red clays are also present below the white china clay. It has been estimated that the probable reserve of China clay in Nagar Parkar area is about 300,000 tons.

Glass Sand

49. Lenticular deposits of glass sand have been found along the foot of the Bhatera hills south-west of Fenchuganj, as a result of reconnaissance geological survey of the area. Some of the lenses are of significant dimensions and can be worked economically.

50. A deposit of silica sand has been located at Mirzapur village west of Sarkorhat, P.E.R., Chittagong District. The thickness of the silica sand which occurs as isolated pockets in the foot hill region, ranges from 1′ 3″ to 1′ 6″. The deposits cover an area of about 4 sq. miles. The sand appears to be of good quality. Analytical results are awaited.

Radio-active sand

51. Placer concentrations of heavy minerals are present in the sands along the ocean beach at Cox's Bazar, East Pakistan. The Placers are radio-active and include substantial amounts of zircon and small amounts of monazite. Twelve miles of Beach were examined in this case and it is reasonable to expect that similar placer concentrations may exist along the entire length of similar beach from Cox's Bazar to 53 miles towards the Burma Border.

52. The reserves of heavy minerals in the placers examined are estimated to be 487,000 tons of sand containing 10 per cent heavy minerals, 163,000 tons of sand containing 20 per cent heavy minerals, and 6,300 tons of sand containing

30 per cent heavy minerals. The average proportion of magnetite in the sand is only eight per cent of the heavy minerals but magnetite is locally abundant in certain small lenses.

Radio-active minerals

53. The discovery of uranium mineralization of sand stone of the "Siwalik group" has been made near Rakhimunh, 32 miles west of Dera Ghazi Khan. No radio-active mineral could be identified, but at one place a yellowish-green material has been found. Prospecting has been carried out north of Rakhimunh. This stratigraphic horizon, will have to be traced north and south for a considerable distance, because of the widespread distribution of "Siwalik" sandstone in West Pakistan.

Baryte

54. A large deposit of baryte has been found at Gungao near Khuzdar. Reserves of the exposed mineral are estimated to be about 1.4 million tons. It is likely that a greater quantity of the mineral is present at a greater depth. Another deposit of baryte has been found near Kohala in Hazara District. The reserves here are estimated to be about 150,000 tons. Baryte is at present being imported mainly for use in oil well drilling. As the newly discovered deposits of baryte are developed, the import of this mineral will be reduced or stopped.

Salt

55. Geological studies of the Khewra Salt Mines area were carried out on a scale of 1:250 feet in an area of 12-15 square miles and the reserve of salt have been estimated at 83,000,000 tons. More than 4,512 feet of salt was proved by drilling in the salt bed near Bahadur Khel in Kohat District.

Brines

56. A huge reserve of about 25 million barrels was discovered at Dhariala (District Jhelum) by Messrs. Attock Oil Company, which contains valuable salts of potassium, sodium, magnesium and calcium, but has remained unexploited. Based on a flow of 300 barrels a day a single well will last for over 20 years. On analysis the brine is found to contain the following:

Potassium chloride	6.5%
Magnesium chloride	16.8%
Sodium chloride	3.1%
Calcium chloride	6.1%

57. Further investigations are being made to ascertain the extent of reserves and the flow of brine. Salts extracted from the brine can be a good source of foreign exchange earnings and savings. The potassium salt can be used as a fertilizer.

Training and Research

58. The availability of technical manpower of the required calibre and of laboratories for the analysis of research on mineral finds will determine the speed at which the proving and exploitation of mineral resources of the country can proceed. The Second Plan recognised the great need for geologists, geophysicists, mining engineers, and chemists for this purpose. A college of Mineral Technology provided in the Second Plan is now in the process of being set up at Quetta and will be in full operation during the Third Plan.

59. The Third Plan makes a provision of Rs. 62 million of which Rs. 20 million will be spent in East Pakistan and Rs. 42 million in West Pakistan, for providing training facilities for mining engineers, geologists and supervisors.

Financial allocation

60. The proposed minerals and fuels development programme of Rs. 1,440 million during the Third Plan will include about Rs. 690 million in the Government financed sector and about Rs. 750 million in the private sector. Of this about Rs. 200 million will be required for the completion of the activities and projects started in the Second Plan. The Plan programme for minerals and fuels development is summarized in the following table:

TABLE 6

(Million rupees)

	Total	East Pakistan			West Pakistan		
		Centre	Provl.	Private	Centre	Provl.	Private
1. Geological Survey	60.0	24.0	—	—	36.0	—	—
2. Oil and Gas Development Corpn.	276.0	141.0	—	—	135.0	—	—
3. Private Cos. Oil and Gas Prospecting	300.0	40.0	—	120.0	35.0	—	105.0
4. Gas Transmission and Distribution	294.0	40.0	—	75.0	19.0	—	160.0
5. Coal and Peat	304.0	—	80.0	80.0	—	59.0	85.0
6. Selected Minerals	144.0	10.0	10.0	20.0	10.0	14.0	80.0
7. Training and Research	62.0	5.0	10.0	5.0	5.0	17.0	20.0
Total:	1,440	260.0	100.0	300.0	240.0	90.0	450.0

Physical Targets

61. As a result of the proposed development programme both in the public and private sectors during the Third Plan period, the following increases in production of selected minerals and fuels are expected:

TABLE 7

Minerals/Fuels	Unit	Production estimates 1964-65	1969-70 Projections	Percentage increase
Natural Gas	Thousand Million Cu. ft.	80	200	150
Coal	Thousand tons	1,500	3,000	100
Sea Salt	-do-	290	450	55
Rock Salt	-do-	215	400	86
Chromite	-do-	20	50	150
Silica Sand	-do-	25	50	100
Limestone	-do-	2,800	7,000	150
Gypsum	-do-	240	660	165
Petroleum (Crude Oil)	Million Imp. Gal.	140	200	43

Training and Research

[illegible] in which the training and exploitation of [illegible] resources of the country can proceed. The Second Plan [illegible] for [illegible] mining, geophysics [illegible] Technical [illegible] in the process of being [illegible] in operation during the Third Plan.

60. The Third Plan makes a provision of Rs. [illegible] million of which [illegible] will be spent in East Pakistan and Rs. [illegible] million in West Pakistan, for providing training facilities for mining engineers, geologists [illegible]

Financial allocations

61. The proposed [illegible] programme [illegible] Third Plan [illegible] million in the Government sector and Rs. [illegible] million in the private sector. [illegible] in the following table:

TABLE [illegible]

	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1. Geological Survey	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3. [illegible] Oil and Gas [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5. Coal and Peat	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6. Other Minerals	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7. Training and Research	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CHAPTER XXIII

WORKS PROGRAMME

The Works Programme is a unique experiment in grass-root planning and the mobilization of energies of the people for projects of local importance in a democratic set up. The public expenditure, though relatively small, acts as a catalyst for bringing forth public enthusiasm on co-operative self-help basis and has a much larger impact on the rural economy than is indicated by its size. The Programme initiated in the Second Plan period on an experimental basis outside the Plan framework has already achieved a dramatic success and holds rich promise for the future. The Third Plan includes a financially larger and functionally broader Works Programme within its framework.

Philosophy and rationale of the Works Programme

2. Over-population with its attendant pressure on land is a liability in under-developed countries which can be converted into an asset if the surplus manpower can be put to productive use. While centrally planned economies have in some cases successfully mobilized this potential resource for development, it has been difficult to move effectively in this area in a democratic country because of the regimentation involved. The traditional pattern of economic development does not necessarily provide an answer to the problem of employment in an over-populated country. Generally there is limited scope for employment of labour on big projects even if some adjustments are possible in the technology imported from Western countries. Also, since surplus labour is generally reflected in underemployment and seasonal unemployment in the rural economy it is necessary to provide additional and seasonal work for them near the place of their residence. The Works Programme attempts to do this by creating work opportunities in the rural areas on projects of local significance requiring a small dose of capital as a complement to local labour and the benefits of which can be easily identified by the workers themselves. This for the first time brings the village, which remains the basic unit of social and economic organisation for the bulk of the population, directly into the orbit of development activity. The project formulation and execution in the Works Programme being through the agency of basic democracies, there is an integral relationship between the political and economic development of the village community.

Earlier efforts for rural development

3. In Pakistan, while policies of rural uplift received considerable attention from the beginning, the main problem was to have an institutional link with the numerous and scattered villages and the atomistic units of cultivation. The first attempt to carry out a comprehensive programme of village development was initiated in

1953. The Village Agricultural and Industrial Development Programme, popularly known as the Village AID, aimed at a systematic improvement of village life through the efforts of the villagers themselves and with the help of specially trained village workers. An expenditure of Rs. 100.53 million was incurred during the First Five-Year Plan and 174 development areas were opened throughout the country, 80 in East Pakistan and 94 in West Pakistan. Development Officers, Supervisors and Village AID workers were posted in these areas for organizing rural development on the basis of self-help and co-operation between the local people and various Government Departments. Under this Programme, two Academies for Village AID Development were established, one in each Province, for training of Village AID Officers in community development. The Programme achieved only a limited success because of the shortage of technical personnel and lack of proper co-ordination amongst the various Government Departments at the local level. Moreover, the programme expected too much from the people in the form of voluntary work, while the leadership was imposed from outside rather than evolved from within the village community. The Programme has since been discontinued but the two Academies have been retained for conducting training and research in the field of rural development.

Institution of Basic Democracies

4. The missing link in the Village AID programme was the absence of local leadership and the development and growth of institutions within the rural society which would bring the rural areas into direct contact with the process of development originating in urban centres, provide a channel for the communication of the needs and desires of the village population regarding patterns of development, to higher levels in the administrative heirarchy and relay back the decisions supported by necessary financial allocations. This gap was filled by the creation of Basic Democracies in 1959. The basic idea of the Works Programme could not be translated into reality without the foundation of this political and administrative institution which has proved a very powerful instrument of balanced economic growth. It is, therefore, not out of place here to describe very briefly the structure and functions of this institution. Under this system there are four tiers of the Basic Democracies namely:

(*i*) Union Council,
(*ii*) Thana/Tehsil Council,
(*iii*) District Council,
(*iv*) Divisional Council.

5. The Union Council is the basic unit of the system and is closest to the village level. Two-thirds of its membership consist of representatives elected by the people on the basis of adult franchise and one-third consists of nominated non-official members appointed by the Government. The membership varies from Union to

Union depending on the population of the Union concerned. One elected representative in a Union Council represents roughly twelve hundred people, spread over a number of villages. The Union Council has the power to impose local taxes to finance its various activities. The main functions of the Union Council are to provide for rural police, to undertake small development works and to co-operate with various Government Departments as and when called for. The Union Councils have also been given some judicial powers to try minor civil and criminal cases and the Chairman of the Union Council is also the Chairman of the Conciliation Courts.

6. For urban areas there are two types of institutions corresponding to Union Councils. In a small urban area there is a Town Committee which consists of elected representatives and has a Chairman elected by its Members. In bigger towns having a population of 15,000 or more, there are a number of Union Committees consisting of elected representatives. All the Chairmen of the Union Committees of a town are members of a Municipal Committee, which looks after various aspects of the town life and also undertakes development projects, out of its own income raised by taxes and fees and also from Government grants.

7. The next higher tier in the Basic Democracies is the Thana Council in East Pakistan and the Tehsil Council in West Pakistan. The Thana/Tehsil Councils consist of all the Chairmen of the constituent Union Councils and Town Committees and Thana/Tehsil level officers of various Government Departments. The number of official members in the Thana Council does not exceed the number of representative members. The Sub-divisional Officer in East Pakistan and the Tehsildar in West Pakistan is the Chairman of these Councils. The Thana/Tehsil Council is entrusted with the task of supervising and co-ordinating the work of the various Union Councils and does not have authority to impose taxes.

8. The District Council consists of official members selected from the District level officers of the Development Departments and non-official members including Chairmen of Union Councils, Town Committees and Municipalities. The actual number is fixed by the Government in such a way that the number of representative members is not less than the number of official members. The Deputy Commissioner of the District is the Chairman of the District Council. The District Council has the power to impose taxes to raise funds for its development programme which consists of building roads, schools, dispensaries etc.

9. The highest tier is the Divisional Council at the Divisional level. It consists of official and non-official members and the number is fixed by the Government. The Divisional Commissioner is the Chairman of the Divisional Council. This Council is only a supervisory body and supervises and co-ordinates the activities of District Councils. It has no power to levy taxes or to incur development expenditure on its own.

10. At the top of the pyramid of the Basic Democracies system there was a Provincial Advisory Board which was later abolished. The system has gone through a process of adjustment in other respects also on the basis of experience obtained in working it. For example, the system of nomination to the Union Councils is being abolished and the Union Councils will consist entirely of elected members.

Background of the Works Programme

11. At the time of review of the Second Five-Year Plan in 1961, it was felt that the Plan did not go far in utilizing the potential surplus manpower largely reflected in concealed unemployment in the agricultural sector. At the same time, it was felt that instead of waiting for the fruits of development to percolate to the village level in due course, a more positive effort should be made to improve conditions at the village level. The institution of Basic Democracies appeared a logical choice for carrying out this task. The Works Programme was designed to supplement the efforts of the Second Plan in this direction. As it was feared that injection of additional purchasing power in the relatively non-monetized economy of the village in the form of wages might create inflationary pressures, the programme was backed by supplies of foodstuff under the PL-480 programme.

12. The Director of the Academy for Rural Development at Comilla agreed to start a pilot project in Comilla Kotwali Thana to determine the efficacy and feasibility of such a programme and to formulate a procedure of work. The pilot project undertaken in 1961 showed encouraging results and it was proved that given the necessary training and assistance the Basic Democrats were capable of planning and executing development projects of local significance in co-operation with Government officials. On the basis of this result the Works Programme was started in East Pakistan with an allocation of Rs. 100 million in 1962-63. In West Pakistan the programme became operative with effect from the next year.

Works Programme during Second Plan period

13. The scheme for the Works Programme contemplated an outlay of Rs. 1,600 million over the period of four years. As the programme was actually put into operation in the third year of the Plan in East Pakistan and with another year's delay in West Pakistan, only half the allocation was utilized. However, by the end of the Second Plan period, the programme had reached the level indicated by the annual allocations shown below:—

(Rs. Million)

Allocation	*East Pakistan*	*West Pakistan*	*Total*
1962-63	100	*Nil*	100
1963-64	200	100	300
1964-65	250	150	400

Works Programme in East Pakistan

14. During 1962-63, half of the amount under Works Programme in East Pakistan was allocated to the District Councils with major emphasis on District roads particularly in the rural areas. A little less than one-fifth was provided for Municipal/Town Committees in urban areas. Another 5 per cent was for Training and Development Centres. Thus the allocation for Union Councils and Thana Councils was only a little more than a quarter of the total. Encouraged by the performance of these grass-root organizations, their share was raised to 43.5 per cent in 1963-64, in a programme which was double the size of the previous year's programme. The following table indicates the division of the Works Programme allocation under various heads during 1962-63 and 1963-64:—

(Rs. Million)

	1962-63	1963-64
1. District Councils	50.00	60.00
2. Thana Councils	6.21	57.00
3. Union Councils	20.00	30.00
4. Thana Training and Development Centres	4.59	18.50
5. Municipal/Town Committees	19.20	20.28
6. Development Authorities (slum clearance and rehabilitation, etc.)	—	10.00
7. Comilla Kotwali Project	—	2.00
8. Training and evaluation	—	2.00
Total:	100.00	200.00

15. It may be pointed out that under the Basic Democracies system the Thana Council is merely a supervisory body over the Union Councils having no function of raising taxes or incurring any development expenditure. But the Pilot Project in Comilla, besides other things, also proved that Thana Councils were in some cases, in a better position to run development projects. In 1962-63, Headquarter Thanas of 54 Sub-divisions were given separate allocations. This experiment proved that Thana Councils could be used as effective organisations for planning and implementing development works in East Pakistan. Accordingly in 1963-64, all the thanas in East Pakistan were given separate allocations for undertaking development works in the rural areas.

16. During 1962-63, various local councils planned and approved their own schemes but during 1963-64, the approval of plans of a council was left to a Committee in the next higher council. Thus a Committee was set up in the District Council to approve the schemes of the Thana Councils and a Committee was appointed in the Thana Council to approve the schemes of the Union Councils. The schemes of the District Councils and Municipalities were to be approved by a Committee in the Basic Democracies and the Local Government Department of the Provincial Government

17. After the approval of the schemes, actual implementation of the projects was left to the Project Committees which were formed for the purpose. A Project Committee was normally formed for each Project, but in some cases, one Project Committee was given the task of implementing more than one scheme. Usually a Member or the Chairman of the Union Council/Committee became the Chairman of the Project Committee and the other members of the Committee were drawn from local leaders or workers of the area. In this way not only the Basic Democrats but also the leading villagers were actively associated with the implementation of the Works Programme. The function of the Project Committee was to engage labourers, take measurement of the works done, pay wages and submit accounts to the Union Council/Committee. The secretaries of the Project Committees were required to maintain muster rolls, measurement books for earthwork and cash books.

18. Government released funds in instalments and the Project Committees were given advances out of those funds for implementing the projects. The advances were to be adjusted against the muster rolls before giving a fresh advance to the Project Committees. During 1962-63, half of the payment to the labourers was given in the shape of wheat and the other half in cash. The provision of payment in wheat was, however, withdrawn subsequently and the workers were paid in cash once or twice a week.

19. The work of the Project Committees was supervised by the Circle Officer and his staff and also by the Sub-divisional Officer and the Assistant Director of Basic Democracies under the general guidance of the Deputy Commissioner who was made responsible for the successful implementation of the Works Programme within his jurisdiction. Training courses were arranged for the Sub-divisional Officers and the Circle Officers in the Pakistan Academy for Rural Development at Comilla and the Circle Officers, in their turn, gave necessary training to the members of the Basic Democracies and Project Committees in regard to implementation of the projects.

20. Some difficulties were experienced in the implementation of the projects due to the shortage of technical staff and inadequate supply of materials. However, the results achieved so far are encouraging. In East Pakistan during 1963-64,270

miles of pucca roads, 392 bridges and culverts, and 153 drainage canals were constructed and repaired in the urban areas while 463 miles of pucca roads, 24,139 miles of kutcha roads, 785 miles of embankments, 5,058 bridges and culverts, 5,940 drainage canals were constructed and repaired in the rural areas. Besides, 245 Thana Training and Development Centres, 2,066 Union Community Centres, and 88 Coastal Community Centres were also constructed during the same period.

Works Programme in West Pakistan

21. In West Pakistan, the Works Programme was taken in hand during 1963-64 with an allocation of Rs. 100 million. Half of the total allocation was distributed among the Districts of the Province equally and half released on the basis of population in each District. This was done with a view to giving greater weightage to less developed and under-populated areas of West Pakistan. There is wide disparity in population density and state of development in various Districts in West Pakistan. The Works Programme was thus used as an instrument for reducing the economic disparities that existed in different parts of the Province. For distribution of district allocations among the various tiers of Basic Democracies, it was decided that 75 per cent of the entire allocation was to be spent by the Union Councils on schemes suggested and planned by them while 25 per cent of the allocation was to be placed at the disposal of District Councils for executing bigger projects under their supervision. No separate allocations were made for the Tehsil Councils.

22. As in East Pakistan, funds were released in instalments and the task of implementation was given to Project Committees. In some Districts of West Pakistan, one Project Committee per Union Council was formed and was presided over by the Union Council Chairman. In some other Districts, a Project Committee was formed for every project. Some Districts, however, operated both the systems at the same time.

23. The responsibility for the administration of the programme in the District was given to the Deputy Commissioners/Political Agents. The Provincial Government delegated all the powers to the administrative heads of the District/Agencies subject to the conditions laid down in the works manual and related policy circulars. However, some financial limit was imposed on the sanctioning power of the District Council and Divisional Council. Provisions were made to enable the District Council to sanction schemes upto Rs. 50,000 and the Divisional Council upto Rs. 1 lakh which was later raised to Rs. 5 lakhs. The Provincial Government reserved the power of sanctioning schemes costing more than Rs. 5 lakhs.

24. In West Pakistan, the District became the basic unit of administration in rural Works Programme. Substantial powers were transferred to the Tehsil

Councils which, in turn, delegated them to the Union Councils. But the supervisory control over the work done by these bodies remained in the hands of the Deputy Commissioners.

25. At the Provincial level, the programme was the concern of Basic Democracies and the Local Government Department and an office of Director (Projects), Rural Works Programme was created and attached to this Department. A high level committee was appointed at the Provincial level to deal with questions of policy and general supervision of the Works Programme. In addition to this policy committee, a Sub-committee was also formed in order to meet the growing volume of references from the field, to sanction schemes exceeding the competence of the Divisional Councils, and to carry out a general appraisal of individual district programmes.

26. Arrangements were made for training and orientation courses in the Basic Democracies Institutes at Lala Musa and Tando Jam for the successful implementation of the programme.

27. In West Pakistan, the Rural Works Programme comprised of a wide variety of works ranging from metalled roads in the Punjab to Karezes (underground water channels) in the desert of Baluchistan and river gate spurs for reclaiming land for agriculture in the stony mountainous Khurrum Agency.

28. Out of an allocation of Rs. 100 million in West Pakistan during 1963-64, Rs. 0.4 million were kept for meeting the expenses of the Directorate of Rural Works Programme, and Rs. 99.6 million were distributed among the Districts out of which Rs. 81.7 million were actually utilised. An analysis of the reasons for this short-fall highlighted the following facts:—

(*a*) There is no uniformity in economic or geographical conditions in the different areas of West Pakistan. As funds were released in instalments, in some areas they were received at a time when labour could not be spared for construction work.

(*b*) In certain areas not only engineers and overseers but masons and carpenters and other skilled labour were also hard to find. In certain areas the work suffered for want of even un-skilled labourers.

29. It is estimated, however, that Rs. 19.2 million were collected by the Union Councils as contribution made by the people which more than made up for the short-fall in the utilization of public funds. The total expenditure has, therefore, slightly exceeded the allocation. In physical terms, 112 miles of metalled roads, 410 miles of treated roads, 2,810 miles of kutcha roads, 1,500 miles of village tracks, 2,000 culverts and bridges and about 3,000 schools were constructed and repaired. Besides this, some projects relating to Health, Social Welfare and Housing were also executed.

Allocations for the Third Plan

30. Because of the encouraging achievement during the Second Plan period, the Works Programme has been included as an integral part of the Third Five-Year Plan. It has been decided that the Works Programme will form a separate sector in the Plan mainly concerned with the growth and development of the rural economy. An allocation of Rs. 2,500 million has been provided in the Third Five-Year Plan for the Works Programme—Rs. 1,500 million for East Pakistan and Rs. 1,000 million for West Pakistan. The allocation for West Pakistan includes a sum of Rs. 50 million for the Special and Northern Areas.

31. P.L.-480 counterpart funds will continue to finance the programme but it is estimated that only Rs. 1,000 million may be available out of these funds during the Third Plan. The balance of the financial requirement of Rs. 1,500 million will be financed out of Government's own resources.

32. With the increase in the allocation for Works Programme, there will be considerable expansion not only in the size but also in the scope of the Programme. During the Second Plan period most of the expenditure under the Works Programme went to the rural areas and only a small proportion was spent through Municipal and Town Committees in East Pakistan. During the Third Plan, it is proposed to initiate an Urban Works Programme so as to offer employment opportunities to people living in the urban areas and to provide low cost housing, community centres, recreational facilities and social welfare services. Works Programme is intended to supplement the national plan in different sectors, and as such, will reflect the broad principles and priorities of the Third Five-Year Plan for the sake of balanced development. It is thought desirable that the Works Programme allocation should have a broad sectoral breakdown and the Basic Democracies should be free to draw up schemes within the sectoral ceilings. The break-up for sector-wise allocation under the Works Programme should be drawn up by the Provincial Governments keeping in view the peculiar needs of the two Provinces. The West Pakistan Government has laid down broad sectoral priorities with emphasis on link roads (50 per cent of the total allocation) and rural water supply schemes (25 per cent) leaving 25 per cent for other schemes. These priorities are subject to adjustment in the light of local needs and capacity. In East Pakistan an integrated rural development programme will be developed with emphasis on training centres, village co-operatives and improvement of communication and irrigation facilities.

Assessment of the Programme and Measures to improve its working

33. The primary objective of the works programme is, as explained earlier, to mobilize the surplus labour force in the rural areas for constructive work at low capital cost. It is estimated that at the beginning of the Second Five-Year Plan work opportunities were needed for 22 per cent of the labour force counting both unemployed and idle man-years of partially and seasonally unemployed. In East Pakistan during the dry months of winter at least three-fourths of the farmers are unemployed or under-employed. This lack of work opportunity in rural areas is an equally important factor with the pull of the cities in the rapid rate of urbanisation. The Works Programme provides jobs right where the people live. It is estimated that average capital cost for providing employment is Rs. 600 per head in the Works Programme against Rs. 5,250 per head average for the Second Plan.

It was largely with the help of this Programme that for the first time the country could reduce un-employment (including under-employment) during the Second Plan period from an average of 22.4 per cent in 1960-61 to 20.3 per cent in 1964-65.

34. Secondly, the Programme has extended the scope of development activity in the country by bringing the village directly under its purview. Its main contribution lies in linking the village with the mainstream of development activity. The impact of this supplemental role is difficult to measure in terms of the financial allocation and expenditure. For instance, a large part of the allocation in both East and West Pakistan has gone for the construction of rural roads, bridges and culverts. Where a few miles of roads constructed by a Union Council has linked the village to a main artery of communication, its impact on the village economy, patterns of production incentives and attitudes and in the ultimate analysis on national income is much more than can be measured by the increase in investment. It adds to the value of investment in the national transport programme. The same applies to the construction of drainage and irrigation channels and embankments which are of basic importance in the village economy. Without a system of planning in which villagers themselves participate, such complementary projects would be too slow to come with the result that full use of national development projects may not be made.

35. This leads to the third main achievement of the Works Programme *viz.*, its success in inducing a system of planning from below. Planning no longer remains an exercise carried out by the experts and administrators from outside the mainstream of local economic life. The Works Programme has involved a multitude of people spread over remote areas of the country in the task of translating their own desires and ambitions for national development in concrete projects. This broad-based participation in the process of planning by the people whose ways of life are directly affected by economic development is the greatest gain of this programme.

36 While there is no question about the success of the Programme in achieving its basic objectives, a number of problems have been experienced which need to be effectively tackled if the programme is to be expanded and enlarged as proposed in the Third Plan. Some of these relate to the improvement of the environment in which the programme is being implemented while others relate to the organization and implementation of the Programme itself.

37. The first problem relates to the availability of technical skills and supervision. While the Basic Democrats have shown a tremendous capability of formulating and implementing development projects with part-time help from official engineers and technicians, it may be necessary for them to have closer technical supervision as they enter from obvious and simple areas of work to relatively more complex

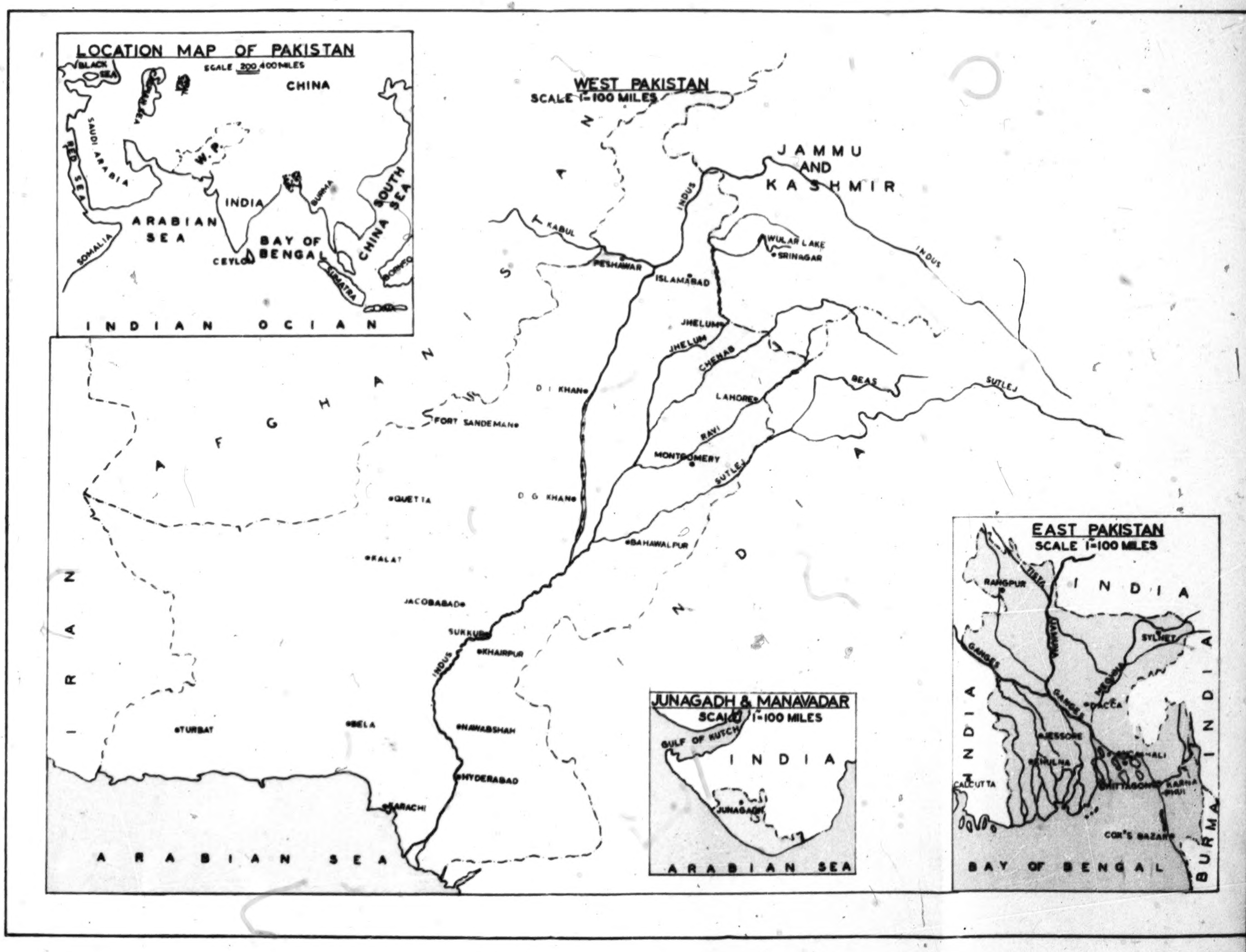
fields. It is probably true even now that standards of projects completed under the Works Programme are not in all cases upto the general standard. There is thus need for improving and enlarging the technical advice at the disposal of Basic Democracies. An effective system should be evolved for ensuring adequate technical help to the local Councils. The technical departments like WAPDA and Public Works Departments should be associated very closely in planning and implementation of the schemes falling under these sectors.

38. Arrangement should be made for effective supervision of the schemes during implementation and all necessary facilities should be given to the supervisory officers in this regard. Wide publicity should be given to the projects to arouse public interest and ensure supervision by the people concerned in addition to the supervision by Government officials. Publicity regarding allocation of funds for each project and the standard rates of payment is also necessary to ensure that people remain informed about the availability of resources and the quantum of work to be accomplished.

39. There should be a comprehensive training programme to impart necessary skills to the people of rural areas to ensure efficient implementation of the Programme. Necessary steps should be taken for training ordinary labourer in various skills and also for greater out-turn of technical people like overseers and surveyors. Thana Training and Development Centres are being established in East Pakistan. Such training centres should be established all over the country for organizing comprehensive training courses and also for co-ordinating the activities of the village co-operatives. The training programme at the Academy for Rural Development and the Basic Democracies Institutes should be co-ordinated with the training programme of the Thana/Tehsil Training and Development Centres.

40. The non-availability of various materials required as essential inputs may also act as a limiting factor on the progress of the Works Programme. Financial allocation is not, in all cases, matched by the availability of materials. Since the market system is not developed in rural areas, it is necessary to make regular and adequate arrangements for the supply of materials which are essential for the implementation of the schemes. Technical advice may also include substitution of material brought from outside by materials locally available wherever possible.

41. Another important problem arises from the fact that adequate arrangements have not so far been made for proper maintenance of the projects completed under the Works Programme. The roads and schools completed under this programme are not the responsibility of provincial P.W.D. or Education Department, as it is outside their programmes. Partly the problem can be solved if the Works Programme is co-ordinated with the development programme of various provincial departments. However, it would still be necessary to institute a provision for maintenance within the Works Programme.


LOCATION MAP OF PAKISTAN
SCALE 200 400 MILES
BLACK SEA
CHINA
SAUDI ARABIA
RED SEA
W.P.
INDIA
ARABIAN SEA
BAY OF BENGAL
SOUTH CHINA SEA
BURMA
SOMALIA
CEYLON
SUMATRA
BORNEO
INDIAN OCIAN
WEST PAKISTAN
SCALE 1=100 MILES
JAMMU AND KASHMIR
AFGHANISTAN
IRAN
INDIA
KABUL
INDUS
PESHAWAR
ISLAMABAD
WULAR LAKE
SRINAGAR
JHELUM
CHENAB
LAHORE
BEAS
SUTLEJ
RAVI
MONTGOMERY
D I KHAN
FORT SANDEMAN
QUETTA
D G KHAN
BAHAWALPUR
KALAT
JACOBABAD
SUKKUR
KHAIRPUR
TURBAT
BELA
NAWABSHAH
HYDERABAD
KARACHI
ARABIAN SEA
JUNAGADH & MANAVADAR
SCALE 1=100 MILES
GULF OF KUTCH
INDIA
JUNAGADH
ARABIAN SEA
EAST PAKISTAN
SCALE 1=100 MILES
RANGPUR
TISTA
INDIA
SYLHET
GANGES
DACCA
JESSORE
KHULNA
CALCUTTA
CHITTAGONG
KARNAPHULI
COX'S BAZAR
BAY OF BENGAL
BURMA